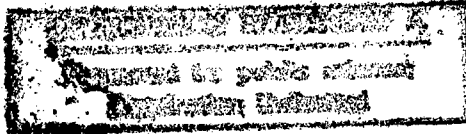


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Maj-Gen Surkov On Value of Political Organizations

91UM0028A Moscow IZVESTIYA in Russian 3 Oct 90 Morning Edition p 1

[Article by V. Dolganov and A. Stepovoy: "Events, Facts and Opinions": "The Army Without the CPSU"]

[Text] The second reading of the draft law on social organizations was held in the Union Parliament with attention being focused primarily on military issues.

Specifically, the deputies introduced a supplement to Section 3 prohibiting the formation of public paramilitary organizations and other arms-bearing groups.

The most substantive debates broke out over Section 16, Paragraph 5, where there are two variant texts: either the "issue concerning the formation of politically affiliated organizations in the armed forces and law enforcement agencies is regulated by legislation governing these organs", or "the formation and activities of political organizations in the armed forces, and organs of state security, internal affairs, the procuracy, state arbitration and the courts is prohibited."

These contradictory points of view were represented by two deputies as they related to the army. They are presented here in the order that they were expressed on the speaker's platform during the session.

Colonel V. A. Martirosyan, Division Commander, Carpathian Military District, (from the town of Rovno):

The task facing us is to resolve this issue in the best interests of the government. We cannot give an advantage to any of the social organizations, and we have to keep in mind, that the Communist Party is a social organization. If we don't take steps today to provide for order in our country and we continue to search for ways to protect the CPSU, chaos will only increase.

The army is not a toy to be manipulated to serve private interests. It must be an instrument of the USSR Supreme Soviet and the Presidency. If membership in the Party within the army and law enforcement agencies is not curbed immediately, then chaos will ensue when other parties surface in these institutions. Authority must reside within the Soviet government, and not within political parties.

Major-General M. S. Surkov, Military Unit Political Section Chief, Transcaucasus Military District, (from the city of Yerevan):

I completely disagree with Deputy Martirosyan's position on this issue. I can give you examples based on my own military experience in Armenia concerning what the army did during those troublesome times in Armenia. I can tell you who was called upon to put their lives on the line and how they responded. And no one was interested

then about party affiliation. No one asked which party I belonged to and what was my particular job. And everything was fine.

I was proud then and I still am that I'm a member of the Party. But today I believe that I can cite many examples where pointing the finger has come in vogue. And I cannot understand why certain deputies spend most of their time pointing out the bad, rather than offering solutions to problems. We were visited by many delegations from Uzbekistan and the RSFSR, and by other deputies. And not one of them said that the communists were interfering with army personnel in any way. Therefore, I cannot in any way agree in principle with what Section 16 proposes. In my opinion, this law should not in any way determine who and where, and in what organization someone can serve. If someone wants to raise this issue, then he should declare himself a force of democracy, and maintain counsel with communists within the army. They asked me about this.

The USSR Supreme Soviet also elected a chairman during the opening session of the Congress of People's Deputies for the commission established to examine privileges granted to certain citizen groups. Elected to this position was USSR Congress of People's Deputy Nikolay Ivanovich Ignatovich from Minsk. He was born in 1940 in Belorussia. Prior to his election to the Supreme Soviet he worked as a special investigator in the Belorussian Procuracy. He served as a member of the Congress commission on the Gdlyan-Ivanov case and was, by the way, among those who did not agree with the majority of the commission and abstained from endorsing its findings.

The section-by-section discussion of any draft legislation is a painstaking, even monotonous task. It was precisely this task which occupied the Union lawmakers during the 2 October morning session. Voting on the draft law on social organizations was held. Discussion on the sections was totally calm.

Commentary on Presidential Decree on Protection of Servicemen

91UM0013A Moscow KRASNAYA ZVEZDA in Russian 5 Oct 90 First Edition p 2

[Article by Maj Gen L. Ivashov, chief, Affairs Directorate, USSR Ministry of Defense: "Rights Protection"; first paragraph is KRASNAYA ZVEZDA introduction]

[Text] We continue to provide comments on the USSR Presidential Decree on Certain Measures for Strengthening the Social and Legal Protection of Servicemen.

The fact that legal protection of servicemen has become an object of concern of the President of the USSR speaks of the low level of this protection. What are the causes of this patently unfavorable situation?

I remind the readers that the very nature of military service and the peculiarities of personnel interrelationships inherent therein are associated with limitations on certain rights of the serviceman, in that he lives by regulations; he must obey orders; he has no right to select his place of residence; he is limited in his possibilities of changing his type of work, obtaining an education, and enjoying free time. In addition, military service is often associated with hazards to life and health; it is characterized by extreme physical and psychological stress. However, that is the nature of military service: It invariably involves giving up certain rights common to citizens that do not wear the uniform. That is the objective side of the matter.

At the same time, many legislative acts, regulations, and orders have become hopelessly obsolete and must be rewritten. Some of them amount to nothing more than a statement of rights and prerogatives that cannot realistically be made a reality. An obvious anachronism can be seen in the fact that a number of norms defining the legal status of the serviceman exists not as laws, but as orders and directives, that is, as acts issued by a military directorate.

Now about causes coming under the heading of subjective. They lie in the area of the military legal system. The principle of one-man command—a fundamental principle of Armed Forces construction—charges the commander (chief) with the responsibility of managing virtually all areas in the life and activity of personnel subordinate to him. He is granted definite authority. It is understood that this authority is intended to be employed by an intelligent and literate commander, one capable of using his considerable power without abridging the legal rights and interests of his subordinates. Is that always the case?

Abuse of the rights of subordinates has become so widespread that we unfortunately no longer pay any attention to its occurrence. Here are some examples. The USSR Government has set strict times in grade for officer personnel. It would appear that chiefs and cadre organs involved would stand guard over strict observance of this normative act. Alas!—officials arbitrarily take it upon themselves to withhold promotions for a month, two months, 18 months, and longer. They are not made to bear either disciplinary or material responsibility for this.

There is more. A directive that curtailed rights and privileges of service females provided by the USSR Government was abolished, thanks to the insistence of military jurists, and, I might add, KRASNAYA ZVEZDA. How many violations of the set procedure are permitted in assignments, transfers, training, and housing! These questions are often decided by a narrow circle of persons, in secret, with someone's opinion dominant, instead of objective evaluation assuming decisive importance. Incidentally, one of the major causes of officers refusing to continue their military

service involves lack of legal protection, which leads to injustice, crudity, grovelling, and patronage.

There is no doubt that the above is exacerbated by the inadequacies of legislation pertaining to the military and the legal nihilism of servicemen, with their dependence on certain persons, not on the law. I can cite as an example Article 117 of the Disciplinary Regulations, which states that it is forbidden to complain of the severity of a disciplinary punishment if a commander does not exceed the bounds of authority granted him. Thus, even the most minor of misdemeanors or omissions can result in a punishment so strict that it can have a lasting adverse influence on a person's future.

Especially serious political and social tones have been taken on by acts of physical violence, humiliation, personal injury, and fatalities as a result of a negligent attitude toward applying safety rules. This is also an indication of the imperfections inherent in the mechanism of their legal protection.

I should also mention another aspect of the problem included in the USSR Presidential Decree. This has to do with violation of servicemen's rights by various organs of authority and control, and also by extremist and criminal elements. KRASNAYA ZVEZDA and other publications on a number of occasions have published resolutions passed by parliaments and governments of union republics restricting the rights of servicemen and their families. Illegal and shortsighted, they place servicemen into a position of second-class citizen and furnish the groundwork for social explosion. In a number of cases, even the higher leadership of a country has passed resolutions that have made matters worse for burdened servicemen and their families. Take the case of the accelerated withdrawal of troops from Czechoslovakia and Hungary. That is something which could not fail to doom thousands of persons to pain and deprivation. Was there no way to approach this problem in a thoughtful manner, without risking the futures of people for the sake of political advantages?

A man wearing a uniform is serving his Fatherland, his people, not any one person. State organs are obligated to provide proper conditions for the Motherland's protectors to work and serve, including a solid guarantee of their rights and personal dignity. We must admit that this is something we do not yet have in full measure.

However, work on the above is in progress. Practically ready for submission to the USSR Government is the Draft Law on Defense; the working group of a commission on military law has developed draft laws on universal military obligation and military service and on the status of servicemen; the General Military Regulations are nearing completion. I can state with confidence that embodied in these acts is an attempt to dispel the barracks mentality of service relationships; create a reliable mechanism for legal protection of the man wearing the uniform; protect the serviceman from curtailment of his rights, honor, and dignity; and endow the

concept of "military comradeship" with realism. I believe that this, along with reliable social guarantees, is the way to put a new face on military collectives and on the Army in general, improve soldier morale, enhance discipline, and assure law and order.

Exactly how would the above be attained? Primarily by writing into law the position of the serviceman as a representative of state power. Illegal actions committed against a serviceman or members of his family, regardless of the initiator, should invariably involve legal responsibility. Organs of state power and control, institutions, organizations, enterprises and officials are bound by the law to assure within the area of their authority observance of laws protecting servicemen, persons discharged from military service, and families of deceased servicemen. It is forbidden for any person to deprive or limit service personnel in the enjoyment of rights established by the USSR Constitution, laws of the country, and military regulations. Servicemen will be granted the right to appeal to a military tribunal and to state and public organs to protect their rights and interests.

The intent in the draft Law on Status of Servicemen is to effect a considerable expansion of servicemen's rights and freedoms. Also guaranteed is the right to free time by the mandatory offer of a weekly pass, a standard duty day, paid leave and other types of leave, including mandatory passes for conscripts. Being written into law are entitlements to health care, education, and housing, with new rates of compensation in the event housing is not available.

Completely new is the provision of state-provided insurance of the life and health of servicemen. This includes compensation for harm and loss due to impaired health or death of a serviceman, and illegal acts on the part of state and public organizations and officials. Norms of legal protection for service personnel will be established.

It is planned to introduce substantial changes into the requirements for serving the tour of duty and develop a regulation for approval by the USSR Government that will be uniformly applicable to all categories of servicemen. Of new provisions that have been proposed, I would like to mention contract service; nonmilitary (alternative) service; an officer's right to receive a discharge from active duty on his own request, on the condition of completion of time in service, of course; and his right to discharge on the basis of family and other reasons, before he has completed the stipulated time in service.

My position is that the state should guarantee citizens who choose to follow the military profession the benefit of a pension for period of service. Discharges based on other than length of service would be permitted in rare cases, such as reduction in the Armed Forces. In the latter case, provision would be made for monetary compensation, the possibility of job retraining for a new (civilian) job, and housing.

It is intended to write into law the requirement that officer personnel be promoted to the next higher rank at a time not later than 10 days after completion of the time in grade specified for the promotion. Acceptable reasons for delay would be limited to incomplete time in grade and criminal indictment of the officer in question.

It is planned to improve call-up and the granting of deferments. For example, the commission on military legislation is considering a proposal to waive draft liability for citizens whose brother or brothers have been killed or listed as missing in action while on compulsory active duty or while serving in a civilian environment. Also under consideration is the question of reducing the term of duty for conscripts to 18 months.

Substantial changes are being made in the legal status of cadets (students) in military schools. Thus, those who satisfy the time requirement for compulsory service, including time served as a cadet, are to continue their studies as servicemen in extended service. Those who enter a school as an Army warrant officer or Navy warrant officer, and all cadets that have completed two years of study, are to hold the status of warrant officer of the Army or Navy. It is proposed that cadets in higher military schools approved for fifth year study be appointed junior lieutenants, with recognition as students (slushateli).

The commission on military law has received the following suggestions: Accord military service a priority position over other types of state service and field of personal activity; raise the draft age; assure universality of the military obligation; change the nature and service conditions in military construction units; conduct a disciplinary investigation prior to taking corrective action whenever time permits; and others. All the suggestions are under careful consideration.

I believe that a great number of the new approaches to service will gain the support of the USSR Supreme Soviet as well as the Ministry of Defense. I can only hope that the parliaments of the union republics, in delegating to the Union authority on defense issues, will take steps to assure the rights of servicemen by rendering the necessary concern for their welfare. Incidentally, the USSR Ministry of Defense has introduced into the draft union agreement an article stating the following: "The sovereign republics are in strict compliance with Union legislation regarding defense and the legal status of servicemen; they are providing employment, personal needs, housing, and health care for persons discharged from active duty and their dependents." Representatives of most of the union republics supported the need for this article.

The writing into law and assurance of rights and obligations of men in service will serve as a powerful tool for enhancing social justice and legality in the Army and Navy, becoming an integral part of military reform.

L. Ivashov, Major General
Chief, Affairs Directorate
USSR Ministry of Defense

Moscow Housing Policy for Soldiers Criticized

91UM0066A Moscow KRASNAYA ZVEZDA in Russian
28 Oct 90 First Edition p 2

[Interview with Colonel General N. Gryaznov, chief of the USSR Ministry of Defense Main Housing Directorate, by Colonel L. Nechayuk under the rubric "Social Panorama": "The Moscow Soviet Is Master of Moscow. And Its Word?"]

[Text] *The news that the Mossovet [Moscow City Soviet] has decided to allocate housing to the families of officers and warrant officers serving in the capital cannot fail to please. More than 10,000 families have finally gotten hope that an end will come to their housing ordeal.*

With careful familiarization with this resolution by the Mossovet Presidium, however, a number of questions arise on its realization. We discussed this with the chief of the Main Housing Directorate of the USSR Ministry of Defense, Colonel General N. Gryaznov.

[Nechayuk] The first clause of the resolution by the city soviet, as is well known, says that the Mossovet Executive Committee [Ispolkom] is charged with seeking an opportunity to allocate additional apartments for the families of servicemen this year. Please elaborate on the situation: How much housing will be allocated, and in what districts of the city?

[Gryaznov] I must unfortunately admit that I do not have that information at my disposal. The fact is that we are not getting any definite answers to our inquiries to the corresponding services of the Mossovet Ispolkom. The discussion of some additional apartments looks strange to us in general anyway, when the Ministry of Defense is already supposed to receive 65,000 square meters of housing space. Meanwhile, it is already October, and we have been allocated just 560 square meters. That is 16 apartments. The total shortfall is more than 142,000 square meters. A colossal figure. And it is not clear how the local authorities will make it up.

Here is what I was told, for instance, at a recent meeting with P. Saprykin, chief of the Housing Accounting and Distribution Main Administration for the Mossovet Ispolkom: The plan target for the construction of housing in the capital will not be fulfilled, and Muscovites will be undersupplied by some 1.5 million square meters, so difficulties have thus also arisen with apartments for the military. We understand these difficulties, but we are assuming that it would be fair to allocate to us at least our proper share of the housing that is put into service. But that is not yet happening.

[Nechayuk] So then what are the assurances of A. Osovtsev, the chairman of the standing commission of the city soviet for social policy, that all servicemen without

apartments will be provided with housing over two years and three months based on?

[Gryaznov] The real picture is this. We are planning to build 1,859 apartments with a total area of 121,100 square meters next year using our own manpower. That is, of course, providing that city enterprises do not fail to deliver the necessary building materials.

Now the apartments for the military promised by the city soviet for 1991. The Mossovet Ispolkom, by government decree, is obliged to allocate 65,000 square meters of living space, or 110,000 of total space, every year. They are for some reason, however, promising only 50,000. That, moreover, includes apartments in housing construction and construction cooperatives (whose share is something like 40,000 a year). But after all, they should not be included in the quantity of housing that we are due by decree of the USSR Council of Ministers. It thus turns out that the Mossovet Ispolkom in essence intends to allocate only about 10,000 square meters for the military in 1991.

Even the figure of 40,000 square meters of housing mentioned in the resolution of the presidium of the Moscow soviet is in older housing stock, the so-called repeat-occupancy stock. It is completely incomprehensible why they intend to allocate to us for a second time what has already long belonged to us. The housing occupied by servicemen and their families in buildings of the ispolkoms of the local soviets, ministries, and agencies has been set aside for the Ministry of Defense since 1938. When an apartment from that stock is vacated, it is occupied by our next in line. This right has been reserved by a series of government resolutions, the latest of which was adopted in 1963, and as far as I know it has not been abolished up to the present. It is nothing more than arbitrariness, in my opinion, to ignore that.

Something similar is happening with the entry of the houses we ourselves have built into service. Some of the rayon ispolkoms of the capital, and Kuntsevskiy Rayon in particular, are demanding that we allocate up to 30 percent of that living space to them in violation of the government decree and the resolution of the Mossovet Ispolkom. They have no aversion to putting on the pressure, right up to refusing to sign the orders and register the new housing.

The Moscow soviet, as we see, while loudly promising to eliminate the housing problem for servicemen over a little more than two years, is not backing it up with practical steps. And we cannot manage on our own. Especially if you take into account that we depend on city deliveries of building materials and structural elements.

[Nechayuk] Is that not why you have proposed to retrofit a number of the building materials plants of the Ministry of Defense that are located in Moscow for the production of the reinforced concrete items necessary for housing construction? This was mentioned in the resolution by the Mossovet Presidium.

[Gryaznov] Those plants of ours are producing large-panel structural elements that are not suitable for the construction of houses in the capital, they do not meet accepted architectural solutions. That means modernization is needed. That will, however, first of all require some time. Second, dozens of garrisons in the western military districts, and not only Moscow Oblast, will be left without the reinforced concrete items that are being produced at those plants today. And there are thousands of servicemen's families that are waiting for housing there as well.

[Nechayuk] What is your attitude toward the fact that the Moscow soviet has decided to deal only with the social committee for homeless servicemen, also granting it the right to monitor the order of priority, on housing issues?

[Gryaznov] We provided the Moscow soviet with lists of those waiting at their request. Let them look after it, monitor it, and check it. We are proceeding just from how to solve the housing problem more quickly. Although we cannot fail to be surprised, naturally, that the Moscow soviet approaches only the military agency with such outright and unjustified suspiciousness. Any industrial enterprise today, if it builds housing using its own money, distributes it itself under the monitoring of the local soviets. The Moscow soviet does not interfere in that, as far as I know. They treat us in a special and clearly prejudicial manner for some reason. Mossovet Presidium Resolution No. 19 of 25 Jun 90, for example—according to which registration of officers and the members of their families is abolished on the basis of an order by the USSR Ministry of Defense, and the allocation of housing to servicemen according to the corresponding government decree has been halted—has not yet been reconsidered. And after all, it contradicts the USSR Constitution and the USSR Law on the USSR Council of Ministers, which mandate the fulfillment of government decrees by all bodies across the whole territory of the country. Moreover, the USSR Constitutional Oversight Committee has deemed the resolution by the Mossovet Presidium to be illegal.

In short, as the poet said, the Moscow soviet is the master of Moscow. We are, nonetheless, hoping that it will be master of its own word as well and keep its promise—to solve the housing problem for servicemen in Moscow.

Army Komsomol Chief Interviewed on Plans

91UM0066B Moscow KRASNAYA ZVEZDA
in Russian 28 Oct 90 First Edition p 2

[Interview with Lieutenant Colonel Aleksey Reshetnikov, chairman of the All-Army Council of Komsomol Organizations, by KRASNAYA ZVEZDA correspondent Captain V. Popov: "We Must Act. But How?—The Problems of the Komsomol on the Eve of its Birthday"]

[Text] *The mood is somehow not a festive one. Even a little bit of optimism directed toward the Komsomol today*

is felt to be in bad taste and out of place—ranting on the score of its imminent demise.

So has the Komsomol died, or is there still a glimmer of life in it? And whom do you ask for answers to these questions? The "higher-ups" or the "lower-downs" of the Komsomol? Where do you seek the reasons for the crisis? In the forms and methods of the activity or in its substance?

There are other questions as well....

After the publication of information on a conference of the leading Komsomol officials of the Army and Navy in our newspaper on October 21, "We Are Beginning Reforms," for example, the editors' phone lit up, as they say. The report that an institute for youth officials would possibly soon be introduced into the Armed Forces was in turn treated by our readers as a rejection of the services of the Komsomol leaders. Some of them did not conceal their delight; as they said, "It is long past time to put an end to the Army Komsomol, and it is good that they have found people in the Army who can reason sensibly as well." Others were angered and confused, saying that "there was still hope for the Komsomol in the Armed Forces, but they will evidently tear that down as well."

Still others saw the latest manifestation of the hardy Komsomol reporting mania in such reorganizational considerations—the USSR Law on Public Associations had come out, and they had decided on the latest restructuring at the Main Political Directorate of the Soviet Army and Navy.

But all of them were together on the request to let the Komsomol officials of the Army and Navy explain the reasons in more concrete fashion...

And so our interviewee is Lieutenant Colonel Aleksey Reshetnikov, chairman of the All-Army Council of Komsomol Organizations.

[Reshetnikov] They are calling and telegraphing both us at the council and the department for Komsomol operations of the Main Political Directorate of the Soviet Army and Navy. I want to state immediately that we do not intend to dissolve the Komsomol organizations. Whatever is being said, the Komsomol organizations in the Army and Navy are perhaps the most energetic of all in expressing and defending the interests of young soldiers today. But the political climate in the country and the provisions of the Law on Public Associations are demanding fundamental steps from us.

[Popov] And what will be the first step?

[Reshetnikov] The first step will probably be this—the All-Army Council of Komsomol Organizations, figuratively speaking, will move out from under the wing of the Main Political Directorate. All of our Komsomol structure is becoming entirely independent on the organizational and financial planes.

[Popov] Much has long been said now about that independence...

[Reshetnikov] I can accept the irony. Our deeds have not matched our words. Are we the only ones? I do not think we are hopelessly behind. The time has come to act, and we intend to act. There is an opinion to implement the activity of Komsomol organizations based on social principles, while leaving the functions of the working apparatus to the Komsomol officials that are freed up....

[Popov] They are not threatened with unemployment....

[Reshetnikov] They are with cutbacks. But those whose jobs are cut back will not be left without jobs. That would be a waste of intellect. We are talking about officers, after all, whose education and experience must be used in the most crucial sectors. Both the Army and the Komsomol needs them. Some of them could help to establish the institute for youth officials.

[Popov] What has caused its founding?

[Reshetnikov] Life itself. Just look. The work of the councils of Komsomol organizations and the committees and bureaus of the All-Union Komsomol had long outgrown their internal framework and were now long oriented toward all the youth in the Army and Navy. A situation had taken shape where the freed-up Komsomol officials bear legal responsibility only for Komsomol members, but actually answer to the fullest for the state of work with all the youth in the armed forces. This to a certain extent contradicts the decisions of the 21st Komsomol Congress to reject the monopoly influence of the Komsomol on youth.

The question arises in that case of "Who has to conduct youth policy in the Army?" Right?

[Popov] And the introduction of the institute for youth officials can remove that question?

[Reshetnikov] Yes. At all levels of Army and Navy structure. From the regiment and ship up to the Main Military Political Directorate. We are assuming that it is they who will ensure the pursuit of an integral state youth policy.

[Popov] This reorganization, reform of structures, or breakthrough to genuine rather than illusory independence will not come cheaply, after all. Has that factor also been taken into account?

[Reshetnikov] How can one not take it into account today? Today probably even infants are starting to say "market" and "convertible currency" instead of "mama" and "papa" as their first words in life.

Yes, independence will not come cheaply to us. First and foremost monetary assistance for freed-up Komsomol officials and for their training. The expenses connected with the practical activity of the councils of Komsomol organizations. We need our own mass media. It is clear

that you can not get by, as they say, on the Komsomol dues, comprised basically of the pennies of the soldiers, under today's conditions.

Our main task today is to devise the most acceptable standard documents for the financial and economic activity of Komsomol organizations under Army conditions. It is an awfully complicated issue. It includes endowing the councils of Komsomol organizations with the rights of a legal entity so that they can form and dispose of property and funds. It includes the organization of monitoring and accounting.

The experience of the independent disposal of half of the member dues collected by Komsomol organizations, by the way, has shown that finances, even if they are inconsiderable, can do something.

But under the new conditions, as I have already said, we hope not to be counting only on dues. The All-Army Council of Komsomol Organizations will at first dispose assiduously of those funds that are in the accounts of the All-Union Komsomol Central Committee and that belong to the Komsomol organizations of the Armed Forces as the subject of the All-Union Komsomol Federation. There are other sources, for example, Komsomol youth *subbotniki* have already been held for more than a year in the Army and Navy. The latest one was held virtually on the eve of the Komsomol's anniversary, and the funds it earned will be directed toward the realization of the interests of the youth.

[Popov] We have not said anything at all about the holiday....

[Reshetnikov] We can talk about it next time. In a year. On the next anniversary. I am sure that it is too soon to cross that date off the calendar. Off the life of the youth....

Effect of New Law on Public Associations

91UM0066C Moscow KRASNAYA ZVEZDA
in Russian 30 Oct 90 First Edition p 1

[Interview with Yuriy Khamzatovich Kalmykov, chairman of the USSR Supreme Soviet Committee on Legislation, by Lieutenant-Colonel I. Sas under the rubric "Topical Interview": "To Act Within the Framework of the Law"]

[Text] *The USSR Law on Public Associations that was promulgated recently has elicited many questions from our readers. Our correspondent met with Yu. Kalmykov, chairman of the USSR Supreme Soviet Committee on Legislation, and asked him to answer some of them.*

[Sas] Yuriy Khamzatovich, we all perceive each newly adopted piece of legislation with hope as the next step toward a democratic and law-governed state. Another law has now been adopted—the USSR Law on Public Associations. What, in your opinion, does it give to our society?

[Kalmykov] I think that it is one of the most important steps in political reform after the changes in Article 6 of the USSR Constitution. I have in mind the institution of a multiparty system in our country. This law was adopted for the development of this provision and for the purpose of legal regulation of the activity of a host of public associations. The point is that these relations have been regulated here by laws from 1930-32. They are not only badly out of date, but moreover, did not encompass all types of public associations. We also simply could not envisage the stormy development of political processes that we are observing today. There is no doubt that this law will aid in the solution of many problems that have appeared in restructuring.

[Sas] Our readers have many questions on Article 16 of the law. It is stated there in particular that "servicemen...are guided in their service activity by the requirements of law and are not constrained by the decisions of political parties." Some are treating this as meaning that since the law frees the serviceman from the obligation to fulfill party decisions that it actually, in veiled form, removes him from membership in the party.

[Kalmykov] You have touched on the very complex issue of the depolitization of the Army and law enforcement bodies. But before we move to that, I would like to remind you of other, no less complex problems that, in my opinion, have been successfully resolved in the law.

Take the procedure for registering public associations and political parties. There was total chaos here before. In one case registration was handled by the MVD [Ministry of Internal Affairs], in another the Ministry of Justice, and another by the local soviet ispolkoms [executive committees]. The law now clearly spells out that registration is performed by the organs of the Ministry of Justice, which are obliged to set up a unified register. The state should know what parties are operating in the country, so as to provide some degree of control and some degree of support. The state should know what aims this or that party or association is prosecuting. We cannot allow the organization of associations that have as their aim the violent overthrow of the existing order, or that propagate war, racism, and the like.

The law arranges everything in its place and defines under what conditions this or that party cannot be registered, under what conditions it must curtail its activities, and what state bodies bear responsibility for it. And this, you will agree, changes much in our life. The law, on the one hand, creates the legal terms for the activity of public associations, and on the other it guards society against the sort of activity that could bring it harm....

[Sas] But getting back to Article 16...

[Kalmykov] The fact that it is being treated as practically an invitation to leave the party is incorrect. This article just emphasizes once more the supremacy of the law over the activity of political parties. It releases no one from

membership in the party, but rather frees us of actions that are at cross purposes with the law.

It must always be kept in mind that, in general, the Army and law enforcement bodies are special state institutions. Proceeding from that, the International Pact on Civil and Political Rights envisages the possibility of some restrictions on the activity of political parties and public associations in those institutions. It is extremely important for us to take that provision into account today. And the law does take it into account to a certain extent. But I emphasize—to a certain extent. When new political parties arise, when they launch a struggle for influence in society, including in the Army and law enforcement bodies, the situation can be altered. And it can not be ruled out, in order that interparty battles not affect the combat readiness of the Armed Forces or the objectivity of law enforcement bodies, that we will have to return to this issue so as to resolve it in more radical fashion.

I would like to remind you that our draft law had two variations on this score. One envisaged the dissolution of party organizations, and the other a halt to active political activity. Neither the one nor the other, as is well known, was approved by the Supreme Soviet. We had to seek a compromise version.

[Sas] I, nonetheless, return once more to the statement "servicemen...are not constrained by party decisions." Not constrained when those decisions do not coincide with the law, or do you have any decisions in mind?

[Kalmykov] Only those contradicting the law. The rest is a matter for the party member himself.

[Sas] The organizations of the CPSU in the units and on the ships were until now practically the only force that could oppose abuses by officials. Now Article 5 of the law does not permit the intervention of public associations in the activities of officials. Will it not happen that this article, instead of facilitating a reinforcement of legality, will work the opposite way?

[Kalmykov] Intervention can be of different kinds. Let us recall our not-too-distant past, when party bodies actually took on the functions of state under the conditions of the administrative command system. Let us recall the ubiquitous "telephone rights," when it was not law enforcement bodies at all that decided whom to judge and whom to spare. The party was actually above the law. And the situation you mentioned in the new law is, if you will, a reaction to that past. Everyone keeps to his place—the party does not interfere in the activity of state bodies, or the state in party affairs.

As for the fight against negative phenomena, if the party organizations operate within legal channels, the law will always be on their side.

[Sas] Do not Articles 6 and 7 of the USSR Constitution, which grant the right to representatives of the party and public associations to take part in devising policy and manage state affairs, contradict Articles 5 and 16 of the

law? Are not the rights of servicemen and parties in general being diminished here?

[Kalmykov] The law defining the rights of parties proceeds from the USSR Constitution. What is a party? It is a certain political organization taking part in the fight for power. The law establishes the means of that struggle— participation in elections, the advancement of their own candidates, and the pursuit of their own program through people's deputies. The law leaves all these rights for servicemen in this or that party, as well. We have, for instance, deputies in epaulets in the USSR Supreme Soviet, as well. So there are no contradictions here.

[Sas] The law states that the activity of party organizations is carried out during nonworking hours. But there are no standard working hours for the military. Can it really be, as one of our readers joked unhappily, that Army Communists will now have to meet only after

retreat? Or do the restrictions concern only assemblies and meetings rather than routine work with people?

[Kalmykov] This is a question, in my opinion, not so much of the application of the law as it is the recommendations of the 28th CPSU Congress, which has also oriented its party organizations toward seeing that basic party work connected with the mass involvement of people is conducted during nonworking hours.

As for army conditions...honestly speaking, I have not looked into the fine points of military service. Some sort of coordination with the military will evidently be required here. I can state my own opinion, not as a legal scholar, but rather as a member of the CPSU. I think that all mass party functions should be conducted at times that are not embraced by basic service functions. This, of course, imposes no ban on the routine work of freed secretaries or the elected active membership.

Moiseyev On Command, Control, Communications

91UM0094A Moscow VOYENNY VESTNIK
in Russian No 10, Oct 90 pp 3-7

[Interview with Army General M. Moiseyev, chief of the General Staff and first deputy USSR defense minister, and Colonel General K. Kobets, deputy chief of the General Staff, by VOYENNY VESTNIK correspondent Colonel Yu. Churkin; place and date not given: "Crucial Links in Command and Communications"—first three paragraphs are editorial introduction]

[Text] One of the main directions of the Soviet Armed Forces General Staff's activities is an improvement in the command and control system of the Army and the Navy and an increase in its effectiveness. This task can only be accomplished by using the latest in information technology (computers, military communications systems, etc.)

It is becoming increasingly obvious today that it is impossible in principle to ensure stable operational and secure command and control on all levels if the commanders (commanding officers) and staffs are not prepared psychologically to work with automated systems. Perestroika, which is gathering strength in the military, also requires fundamental changes in the style, forms, and methods of activities of the command and control organs.

At the request of the magazine, our correspondent discussed the issues of the current status and future development of command and control and communications with Army General M. Moiseyev, chief of the General Staff and first deputy USSR defense minister, and his deputy, Colonel General K. Kobets.

[Churkin] As is known, the General Staff is responsible for command and control of the Army and Navy. Many problems that have accumulated in this area are being resolved now. Do you not think that occasionally this is still being done too timidly? What, in your opinion, are the main problems afflicting the command and control of units, formations, and combined units?

[Moiseyev] I would not say that many problems have accumulated in this area at this time. There is a natural, ongoing process of developing further the means, forms, and methods of warfare, and with it, command and control systems.

However, the current stage of perestroika in the Armed Forces has several new aspects, mandated by our defense doctrine. As it turned out, they have considerable influence on all command and control components. To begin with, calculations show that in the course of combat actions command and control will have to be conducted under severe time pressure in regard to operational speed and optimum solution level of decisionmaking. That is where we are going to have a conflict between the volume of information that the commander and the staff will need to process, and the time allowed for it.

I am convinced that the only way to solve this problem is to switch to paperless information systems, using a variety of computers extensively. What do you think, Konstantin Ivanovich?

[Kobets] Yes, we will have to move in the direction of universal implementation of technical information systems. The computer systems we will use will need to be networked and be a part of unified automated communications system, and we will need to develop software that will produce not only the data our commander and staffs need for their decisionmaking but also offer alternative solutions.

Certain things have already been accomplished in this area. I am getting ahead of myself, perhaps, but I can tell you that at this moment we are concentrating our efforts on the development of artificial intelligence systems. Our short-term task is to bring what has been accomplished so far to the level of practical applications, and to develop those applications.

[Churkin] Will it not happen that with all this attention on the new technology we will forget the people for whom all these machines are designed?

[Moiseyev] Not at all, although I must admit that the psychological preparation of officers and generals for dealing with the computers does present a problem. I think that they all face a lot of painstaking work learning how to use computers. Each of them will have to adopt a new mode of thinking so that eventually working with a computer will become a normal, mundane task. But it will take considerable efforts.

[Kobets] Mikhail Alekseyevich! Let me take it a little further. I think that for a successful transition to a new, higher command and control level in the Armed Forces we need universal computer literacy. We need an overall solution for this task—through officer development courses, through the system of commander training, plus, of course, special classes in colleges.

[Churkin] It is a commonly accepted notion that communications play a special role in the command structure of the Army and Navy. As they say in the Army: "Without communications there is no command." In your opinion, does the quality and reliability of communications meet the requirements of today's commanders and other military leaders?

[Moiseyev] It is not an easy question, but I will try to answer. The dynamics of the development of modern armed forces is such that while yesterday the task of communications was limited to the timely delivery of information, today this information needs to be processed first, which quite often requires the use of quite sophisticated algorithms.

Generally, if I were to give an overall evaluation of our current communications I would say that basically it meets the requirements of commanders and staffs. At the

same time, many of its features are at the limit of current technology. That is why we have such high hopes for automation.

I should also note that our communications specialists should work closely with staffs and other organs in developing new informational and intellectual capabilities for the command and control system. And, by the way, that is exactly what they are doing.

[Churkin] Konstantin Ivanovich! Could you tell us in more detail what kind of difficulties are likely to be encountered in the process of developing a multifunctional communications and automation system and keeping it in a condition of constant combat readiness?

[Kobets] In terms of equipment and tasks, our signal troops have already been transformed, to all intents and purposes, into communications and automation troops. By the way, in some armies they now use the term "Information Troops." Worldwide experience shows that integrating communication systems and automated command systems, as they say, raises the level of difficulty higher and higher.

We are now at a stage where, as noted earlier, we are developing solutions, or rather, implementing forward-looking programs. As a rule we are able to develop new components and include them in the existing structure without disrupting its work.

Unfortunately, many things here depend on factors outside of military signal specialists' control. Difficulties often arise because of the low quality of the equipment under development and its poor reliability. This barrier cannot always be overcome because of imperfections in both the technological and the raw material bases.

There are also situations when complex computerized systems work fine, but still the command system does not function properly because somebody has not delivered the means of documenting such information on time.

The installation of new equipment is not always a smooth process. Sometimes the developers fall behind in providing means to maintain communications systems and elements. There are also some difficulties with the software support for the process of planning and managing communications and automation systems.

It is especially disappointing that sometimes the operations staff of the command organ and the engineering personnel fail to maintain the necessary interaction. As a result, the technological capabilities are underused.

[Moiseyev] It is good that the communications chief can evaluate so soberly the status of his area of responsibility. I do think that he has touched upon a "sore" spot in the activities of the combined-arms commanders and staffs, which is that some officers and generals do not know how, or sometimes simply do not want, to work closely with the signal specialists and listen to their advice.

I am convinced that such an attitude is wrong. A good specialist is not only proficient in technical matters; he can evaluate combat situations as well. The right attitude is that of those commanders who teach their communications officers to act as chiefs of staff and consult with them on various issues.

[Churkin] Now we would like to hear the opinion of the chief of communications of our armed forces on the following problem. Tactical communications are considered to be the most difficult to operate properly. Some blame the means of communications, some refer to the inadequate special education of the troops or the combined-arms officers, and still others complain about a complicated radio-electronic environment. How do you evaluate this situation? What kind of effective measures can be taken?

[Kobets] That's some question, especially if we remember that my main concern, if you forgive the pun, is the highest link of command. Our tactical communications today are accomplished mostly through radio communications. In my opinion, they are equipped with everything that is necessary to ensure stable and reliable communications. However, I do understand "tacticians'" concerns, and this is what I can say on this subject.

We have a variety of programs, which are already being implemented, to substantially increase and qualitatively improve the systems and means of tactical communications, including long-term development.

At the same time, it is the responsibility of the officers of the various forces and services to learn how to use communications. And not just skim the surface but do it seriously, under conditions as close to combat situations as possible.

[Churkin] It is not a secret that both the Army and Navy keep getting new command and control devices and systems. However, in practice their implementation and use are often delayed. Why does this happen?

[Kobets] There are both objective and subjective reasons for this. For instance, until recently the development of prototypes of new weapons and other military technology has been conducted in a rather primitive way. Only some characteristics were being improved, and some new ones added. The troops were generally with it, too.

Now this kind of approach cannot be justified. Now the units and combined units receive not just stand-alone prototypes but entire unique communications systems and automated command systems. This, in turn, has presented us with the necessity of overhauling the whole system of service personnel training.

As to subjective factors, I will name just one: The design bureaus want to minimize their risks when developing new technology, because they are afraid to take responsibility. Perhaps some elements of competition and more

effective economic incentives will help us to overcome this stagnation in creativity?

Something else. There is a so-called psychological barrier that people often develop when dealing with new systems. This stands in the way of promptly putting these systems to practical use. I hope Mikhail Alekseyevich will not take offense, but this problem affects first of all operational command staffs.

[Moiseyev] Now I am put in a situation where I have to defend myself from my own colleague. All right, I will try.

It is a fact that many officers and generals treat new technology they have to learn to use with a degree of wariness, and sometimes plain distrust, and that goes on for quite a while. But both the Army and the Navy have accumulated certain experience in solving these kinds of problems. This experience comes from analyzing the causes of such behavior.

The crux of the matter lies first and foremost in the fact that decisions made by the command organs usually involve increased responsibility for the results. And the higher the link in the command chain, the more mistakes may cost. This explains the desire to work using tried-and-true methods. Another thing that people often tend to forget is that yesterday's success is today's norm and tomorrow's failure, and nobody can afford to disregard this axiom.

However, we have to take appropriate and timely steps to prevent these factors from hindering our progress. Therefore, to overcome this psychological conservatism we need a flexible system that would let us to evaluate activities of the command organs and at the same time take into account changes in military doctrine, in armaments, and in the forms and methods of operations and combat.

It is also important to increase the general level of computer literacy. I should note that such a program already exists and is being implemented.

And, finally, I have to mention that in some instances the quality of communications and automation systems is quite low, especially when it comes to reliability. We have already discussed earlier in our conversation why this happens. Keeping that in mind, I would like to point to the psychological state of the people who work with such equipment. Equipment failure, or its inability to produce correct solutions to problems, quite often causes distrust toward both the hardware and the software. When such things happen, officers and generals tend to fall back on making their calculations and obtaining the necessary information with the aid of traditional methods.

That is why I appeal to our designers to do everything possible to increase the reliability of prospective command and control systems and components. And the communications specialists, in turn, should raise the

standards they require of new technology, and filter out poor-quality prototypes before they reach the troops. Unfortunately, we still have situations when, after many years of research and development, we have to refuse this or that system because of design problems.

[Churkin] Judging by quite concrete actions, other military commands, such as those of the United States, France, and West Germany, give priority to command and control and communications. Are we falling behind in this area, and specifically in space technology applications?

[Moiseyev] I can state with full responsibility that our Armed Forces leadership has always considered, and continues to consider, maintaining our technological parity and further developing our technical base as its highest priority.

In general, despite some lag in certain areas, which is mostly the result of shortcomings in technology and of the limited capacity of our economy, we are able to maintain parity in the command and control area. We have to admit, though, that until recently this parity has been achieved mostly because of excess structural and functional solutions, and sometimes also because of tremendous efforts on the part of our operational and technical command and control personnel.

However, today the efforts of the Ministry of Defense alone are not sufficient to support the system's infrastructure and the electronic component at the required level. In order to substantially raise the quality of our communications and automation systems while simultaneously lowering their cost, we need a clear program that would coordinate the actions of all industrial branches (including those not related to defense) and science.

It is important to remember that industries that are involved in the development and manufacture of telephone and facsimile equipment, radio and satellite communication devices, and industrial and personal computers do not need any conversion, since they not only solve problems of improving command and control of the Armed Forces, but, even more importantly, raise to a higher level the potential for improved information management for the entire country.

[Churkin] Mikhail Alekseyevich, it looks as though you deliberately skipped the part of the question relating to satellite command and control and communications. Are you leaving it for Konstantin Ivanovich?

[Moiseyev] That is right. Here, as they say, my deputy is the chief ideologue. He is the man for the job.

[Kobets] I do not think I would be bending the truth if I said that the main direction of our technical policy in developing military satellite systems is their suitability both for defense needs and for general-purpose peaceful programs of our state. I am convinced that satellite communications will soon overtake all other means of

communications, because they provide fast communications with command objects at practically unlimited distances, have a large number of high-quality channels, and are less vulnerable to various interfering and disabling actions.

As far as we know, we have kept our parity with the United States in developing and perfecting satellite communications. However, the technological level of our system and its elements still lags behind that achieved by developed countries. Therefore we are increasing our efforts to bridge this gap.

[Churkin] Now, a question that concerns many officers. What are the perspectives and the main directions in which the theory and practice of command and control, as well as communications, are going to develop?

[Moiseyev] Many parts and directions of this theory are being reappraised now in light of our defensive military doctrine. This is a systemwide task.

Speaking about priorities, I would like to note the following. First, we have to prepare ourselves in advance for the restructuring of command and control on the basis of future communications and automation (which we have already discussed). Work based on this concept is now going ahead in all directions.

Second, when we work on command and control organization, forms, and methods, we should use state-of-the-art achievements in science and technology. For instance, we should test existing systems with elements of artificial intelligence (multipurpose expert systems) in conjunction with existing computational and informational tasks and models.

Third, together with raising the level of computer and system literacy, we have to work on the task of equipping our troops with small-scale means of automation, personal computers, and means of document and facsimile transmission.

[Kobets] Today, the standard against which we should measure the level of development of the electronic component of the command and control system are international-level accomplishments in the area of communications and automation. We continuously study the directions of research and the results achieved by the leading scientific institutions. We thoroughly study existing tendencies and regularities in light of our tasks. The necessary scientific and technological potential for such work does exist.

Our analysis shows that the strategic, long-range directions in the development of technology, communications, and automation which we have adopted for our Armed Forces do not deviate from worldwide trends. In communications it is digitization, conversion to international standards and recommendations, the development of adaptive communications in the widest sense of this word, learning to use nontraditional frequencies, and increasing the equipment's reliability, useful life span, and resistance to interference, etc. We have already discussed the role of satellite communications and its place in the overall picture.

In the field of technology and software for automated systems, development should proceed along the lines of military robotics, artificial intelligence systems, distributed and multifunction processing, personal computers, and multipurpose networks.

Our main systemic task, I am firmly convinced, is to overcome a variety of negative consequences of the previous stages in automation and communications. First of all I have in mind the less than rational allocation of existing resources in the majority of various command and controls.

There is no doubt that there are quite a few problems, but they are being solved. The initial results are encouraging. In short, we have approached a very important phase of transformation. If we accomplish all that is on the drawing board, we will take the initiative in our own hands for a long time to come, and will substantially propel both the theory and practice of command and control and communications.

[Moiseyev] Let me say a few words in conclusion. Thanks to efforts of the people of the world, and to our renewed external policy, the international climate is warming up. It has become possible to lower somewhat the level of military confrontation. Despite some setbacks, the process of the relaxation of tensions continues.

However, we, the military, must remember that as armaments are being reduced and we move from quantitative to qualitative parameters, the role of command and control systems and their electronic component—communication and automation—objectively increases.

[Churkin] Thank you for your insights. Please forgive me for keeping you longer than we agreed on.

[Moiseyev] If it serves a useful purpose, we are ready to answer more questions from your readers.

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New Commander of Leningrad MD Interviewed

91UM0030A Leningrad *LENINGRADSKAYA PRAVDA*
in Russian 1 Aug 90 p 2

[Interview of V.N. Samsonov by Leningrad TASS Correspondent A. Shcherbakova: "The Army and the Processes of Change: Seven Questions for the New Military District Commander"]

[Text] Lieutenant General V. N. Samsonov, who holds the Order of Lenin, has been appointed to be the commander of the Leningrad Military District. An office in the former building of the General Staff is now occupied by a man who has devoted 31 years of his 49 years of life to the army; he has served in the Far East, in Poland, and in the Transcaucasus. The new commander has already begun to acquaint himself with the district, which includes several oblasts within the Karelian ASSR. In the course of his very busy day Lieutenant General Samsonov found a few minutes to answer my questions.

[Shcherbakova] Viktor Nikolayevich, have you already determined the main directions of your work in your new job? What do you think are the most pressing issues?

[Samsonov] I plan to give maximum attention to improving the structure of troop management and raising the professional training of officers. I will be taking steps to improve the living standard of servicemen and their families and to provide them with apartments. In the coming year the lion's share of all funds earmarked for construction will go for housing. It is time finally to resolve this crucial matter.

[Shcherbakova] Will your subordinates have anything to be concerned about during the process of improving the management structure? Won't some of them lose "soft jobs."

[Samsonov] You, of course, are speaking about a reduction in the administrative apparatus. Those who have a lot of work to do and who are doing their jobs will have nothing to fear. But the laggards will have to give up their soft chairs.

[Shcherbakova] What is your opinion of the idea of a professional army, about which so many people are arguing. Is it possible that such an army could be formed here?

[Samsonov] I am an advocate for such an army. I think that we must pay a wage that is in keeping with such difficult and dangerous work. Those who choose a military career must be well provided for. However, in today's conditions such an idea appears unacceptable; we do not have the funds required to maintain a professional army in this country. At present soldiers have become a cheap work force. They are being called upon to help with the harvest, to build roads and to maintain public order. This prevents them from doing their primary job. This results in a poor level of training, the

failure to carry out training programs and, consequently, a reduction in combat readiness.

[Shcherbakova] What kind of reform of the army do you envision?

[Samsonov] There is a lack of a unified concept at present; but several of its elements have been adequately defined. These include raising the professional caliber of the officers, the switch to a defensive military doctrine and much else. Not wanting to be seen as a reactionary, I will remind you about the changing role of the political workers as well. They will be engaged in training soldiers rather than in party work.

[Shcherbakova] Viktor Nikolayevich, the people of Leningrad already know that you have come here from the Transcaucasus Military District. There are many questions about your involvement in the tragic events in Tbilisi.

[Samsonov] Yes, I served in the Transcaucasus as the chief of staff and deputy commander of the military district. For a period of time I was the first deputy to General Rodionov. I can say with complete candor that the decision to use military force in the critical situation in April 1989 was not made by the command of the military district, but by the Georgian government.

[Shcherbakova] If, God forbid, the situation should repeat itself in Leningrad and such a decision was in your hands, would you give the troops an order to attack?

[Samsonov] No, I would not give such an order. The army must not do battle with its own people; it has a different purpose.

[Shcherbakova] And what can the civil authorities and residents of Leningrad expect from the new commander?

[Samsonov] Most likely, cooperation and mutual support. I know that the district has come to the aid of the city on more than one occasion, providing it with equipment and gasoline. I hope that we can work fruitfully together.

Officers' Rising Cost of Living in Estonia

91UM0063B Moscow *KRASNAYA ZVEZDA*
in Russian 27 Oct 90 First Edition p 2

[Article by Major V. Borodin and Other Members of the Council of the Officers' Assembly (a total of four signatures): "At the Poverty Line"]

[Text] We are appealing to you on the instructions of the unit Officers' Assembly. In Estonia, where we are on military duty, there has been a "mad" increase in prices beginning in January 1990. In the course of the year, fish and lemonade have become one and one-half to two times more expensive and government subsidies on prices on fruits and vegetables have been rescinded. And since October 15th grocery prices have gone up drastically: Bread and bakery products are twice as expensive

and beef is four and one-half times more expensive than before. Prices have jumped sharply on milk, butter, and sausage...

Pursuant to a decision of the Estonian government, subsidies are received only by students, children, and invalids. But the fact of the matter is that in the past year journalists, lawyers, doctors, administrative staff, MVD workers, teachers, and other residents of the republic have received very substantial salary increases.

After threatening a labor strike, wage increases were won by mine workers and electrical power workers. The Ministry of Transportation of the USSR is seeking funds to increase the wages of Estonian railway workers. But, as can be seen, military servicemen have been left behind. Is it possible that we are going to be cast off beyond the poverty line?

Ministry Press Center on 'Antiarmy Provocations'

*91UM0115A Moscow SOVETSKAYA ROSSIYA
in Russian 20 Nov 90 Second Edition p 2*

[Report by USSR Ministry of Defense Press Center: "Antiarmy Provocations Continue"]

[Text] Recent days have been marked by new cases of provocative, hooliganist actions toward military units in a number of regions of the country.

In Kishinev on 16 November, about 30 people burst into the garrison Officer's Club, tried to carry out a pogrom, threatened employees with physical reprisals, and threatened to set fire to the building. The illegal actions were stopped by the patrol detail that arrived.

In Tbilisi on 17 November at 2100 hours, a group of more than 30 people attempted to break into the building of the district Officer's Club. Only after a warning by a sentry about the use of weapon and a warning shot over their heads did the attackers steal away. They caused material damage to the building.

In Vilnius on 17 November, a group of about 300 people blocked the entrance to the military camp. Those assembled displayed insulting antiarmy slogans and shouted filthy swearwords. Warnings by command representatives were ignored. In connection with the fact that they began throwing stones, bottles, and smoke bombs onto the territory of the camp, creating a threat to service members' lives, fire trucks and firing of blank rounds were used to drive back the crowd. Since the hooliganist actions and abusive attacks continued even after this, the crowd was dispersed beyond the boundaries of the camp by a subunit. The command authorities had given the leadership of the Ministry of Internal Affairs advance notification that a provocation was being prepared and received assurances from it that necessary measures were

being taken. However, as in similar instances before, no steps were taken to head off the provocation.

In the vicinity of Saldus (Latvia) on 18 November, an attempt was made to block the territory of an aviation training center. Tractors were used to dig up the road leading to the center, barriers were constructed from trees, and 10 posts for communications lines were knocked down. On that same day, there was picketing of the Baltic Military District Headquarters and Officer's Club.

The goals of the organizers of these antiarmy actions do not raise any doubts. It is also clear who is benefiting from this and who is hiding behind the direct participants of the provocations. It is those for whom the Soviet Armed Forces, called upon to stand guard over the security of the country and stability of the state, serve as an obstacle and are an impediment to realization of their political ambitions and separatist plans.

The fighting men of the Army and Navy see serving the fatherland as their highest patriotic duty. They are part of our society, part of the people. They do not and cannot have any designs aimed at infringing on someone's rights or at oppressing someone. At the same time, they cannot disregard actions that are damaging to the country's defensive capability and their legitimate interests, actions that create a direct threat to the lives and health of service members and their family members. All measures necessary will be taken to put a stop to such actions.

Plans for Improving Servicemen's Diet

*91UM0120A Moscow KRASNAYA ZVEZDA in Russian
22 Nov 90 First Edition p 4*

[Question from reader and reply by Lt Gen I. Kozlov, chief of the Central Food Directorate of the USSR Ministry of Defense, under the rubric "Briefing for the Readers": "Food Rations for Servicemen"]

[Text] **It has been reported more than once in the mass media that it is planned to improve the diet of enlisted men and the rations of officers. Tell me when this is going to occur, and what changes will be made.—R. Leontyeva, Irkutsk**

Lt Gen N. Kozlov, chief of the Central Food Directorate of the USSR Ministry of Defense:

The Council of Ministers passed a decree on 17 November establishing new rations for servicemen. There were previously 15 [types of basic rations]. These have now been reduced to six (general military, flight, naval, submarine and training, as well as rations for students at Suvorov and Nakhimov schools and at military music schools).

The general military (soldier's) rations will be introduced in stages: 1 January 1991, 1992, 1993. The table below gives the daily diet (for the main food items):

Table. (main figures represent grams)

	1990	1991	1992	1993
Milk	—	100	100	100
Eggs (per week)	2	4	4	4
Potatoes	550	600	600	600
Other vegetables	270	300	300	300
Meat	175	175	185	200
Fish	100	100	110	120
Juices (fruit and berry)	—	—	50	50
Tea	1.0	1.2	1.2	1.2

Approximately the same changes are being made in the diet of navy personnel.

The dietary norms are being improved for students at Suvorov and Nakhimov schools and those at military music schools. Officer rations are being altered considerably.

Rations are to be issued for officers serving at locations equivalent to areas of the Far North. In the Komi ASSR, Arkhangelsk, Tyumen and Tomsk Oblasts and the Northern Dvina region, among others.

The substitution table for food items has been thoroughly revised.

The Central Food Directorate of the USSR Ministry of Defense has been directed thoroughly to work out the matter of issuing rations in kind to all officers serving within the USSR. We have been directed to do this as a result of the recent meeting of the President of the USSR with military deputies at all levels.

The increment to the pay scale for officers in lieu of rations is being increased by 30 rubles per month as of 1 February in accordance with this decision.

Design Problems of Tank Engines

91UM0026A Moscow *TEKHNIKA I VOORUZHENIYE*
in Russian No 8, Aug 90 (Signed to press 30 Jul 90)
pp 8-9, C4

[Article by Lieutenant Colonel and Candidate of Technical Sciences P. Shantsev, Lt Col A. Miroshnikov, and Reserve Lt Col V. Petrenko: "Tank Power Plants"]

[Text] The problem of designing a powerful but at the same time small, highly economical, and reliable engine is one of the most important in the development of tank engineering.

The first postwar generation foreign medium tanks that were manufactured during the 1950's were primarily equipped with gasoline engines with up to 477 kVt (600 horsepower) and their range did not exceed 200-250 kilometers. Due to the relatively low density of the gasoline used, they had a high specific fuel consumption. Furthermore, the possibility of using various liquid fuels was excluded. Therefore, moderately augmented high-speed diesels whose output level totaled 530-610 kVt (720-830 horse power) were installed in the second postwar generation tanks of the 1960-1970's.

Later for the purpose of increasing such combat properties as off-road capability and combat readiness, foreign experts designed new engines with output of 895-1,100 kVt (1,200-1,500 horsepower) for third postwar generation tanks, that is, practically two times greater than second generation tanks. Furthermore, vehicle average power output reached 2.1 kVt/kN [kilowatts/kilonewtons]. The use of highly augmented multi-fuel turbo-piston (TPD) and gas turbine (GTD) engines was a characteristic trait of this stage of development of foreign tank engineering.

In recent years as has been reported in the press, foreign countries have undertaken a series of programs to develop power plants (SU) for armored vehicles and to reequip tracked and wheeled vehicles with more powerful and reliable engines (for 1995-2000). One of them provides for the development of a general concept of power plants and, in accordance with the plan, must be concluded with demonstration tests of prototype power plants with outputs of 500 kVt (748 horsepower) and 1,103 kVt (1,500 horsepower). They calculate that the result of this work will be development of a scientific technical base for power plant design for the next generation tanks of the year 2000 and subsequent years.

According to foreign experts, the average output of the future tank must be two times higher than the American M-1 (four times higher than the M-60) and the area of the engine-transmission compartment must be reduced by no less than one-third. It also requires that the output to the new vehicle's drive gear must be no less than 785 kVt (1,068 horsepower). They propose obtaining a dimensional output of the future diesel of 920 kVt/m³ and an average weight of 0.67 kg/kVt (also including the

cooling system). At the same time, the tank's acceleration from 0 to 32 kmh must occur within seven seconds and the specific fuel consumption by the engine must total 192 gms/(kVt-hour). By the year 2000, they plan to reduce it by 20 percent, that is, to approximately 154 gms/(kVt-hour). The engine will be multi-fuel and start easily without using auxiliary devices with an ambient air temperature of up to minus 52 degrees Celsius. Furthermore, the engine's average mean time between failures must be no less than 1,000 hours and until major repairs, 2,000 hours. Technical servicing time at the minimal skill level will be no more than 1.8 minutes per hour of operation.

They propose using the results of the design of the adiabatic turbo-piston engine or a turbo-piston engine with reduced heat output and also an engine with reduced friction losses to fulfill the tasks assigned by the program. Furthermore, they plan to use a turbo-supercharging system with a turbine regulated nozzle device, electronic regulating and control systems, an improved cooling system and a high pressure fuel injection device.

The adiabatic diesel's specific design features consist of the fact that the engine's elements which directly come into contact with hot gases (piston, cylinder liner, cylinder head, valves, and exhaust channels in the block head) are isolated using heat resistant ceramic materials. According to foreign experts, a number of indisputable configurational and operational advantages in tanks will be realized with the development of this engine.

They think that engines will be able to operate under high temperatures and the need to cool them will practically disappear thanks to thermal isolation of "hot" engine parts. Furthermore, a significant portion of the heat will be transmitted via exhaust gases and will increase their heat content. Using this exhaust gas heat energy in the turbocompressor or in an additional gas turbine linked by the mechanical transmission with the engine drive shaft, they can substantially increase its efficiency factor and economy. They also suggest that they can decrease the power plant's weight and size if a cooling system is not used, and furthermore, in this case they can also reduce the noise level since the engine's need for large air intake and exhaust louvers disappears.

As a result, foreigners are devoting a great deal of attention to the issues of developing heat resistant ceramic materials and producing engine parts from them. New composite materials have been obtained based on silicon nitride (Si₃N₄) that have a filament crystalline structure. The developers think that this compound will find wide use in engine design. It maintains high mechanical stability at temperatures up to 2,173 K (1,900 degrees Celsius), has a heat dispersal coefficient that is two times less than silicon carbide (SiC), is chemically stable, is not susceptible to corrosion, and has dielectric properties.

It has been reported that at the present time there is an adiabatic diesel design based on a Cummings NHC250 series six cylinder diesel with a turbo supercharged output of 170 kVt (231 horsepower). Testing on a five-ton army vehicle demonstrated that fuel consumption was significantly lower (approximately 33 percent) than on a vehicle with a basic engine. The absence of a cooling system permitted the exclusion of nearly 300 parts from the vehicle's power plant design and reduction of engine weight by 154 kg. and engine displacement by 56.6 liters.

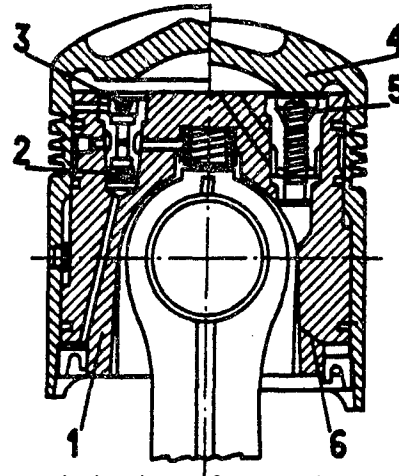
A V-shaped eight-cylinder engine with 550 kVt (750 horsepower) output is being developed with a pulse supercharger system, a forced-air air-cooler, and also a radial power turbine. Design of its parts and the operating cycle are being developed on a one-cylinder engine. They assume that the specific effective fuel consumption will total 172 g/(kVt·hour).

Despite the fact that there have been a series of promising experiment results, foreign experts think that they will not succeed in developing a completely adiabatic diesel during the period 1995-2000. Therefore at present they consider one of the most promising directions to be development of an engine with reduced friction losses. They intend to implement three new technical solutions in it: hydrodynamic piston lubrication, solid lubrication of the crankshaft's main bearing and crankpin bearing, the piston pin, and the turbocompressor rotor shaft, and solid lubrication of the camshaft's metal rolling bearings, valve rocker drive mechanism and injection pump. According to expert calculations, this will permit reduction of friction losses by approximately 75 percent and will reduce specific effective fuel consumption to 154 grams/(horsepower hour).

While developing the concept of improved power plants for next generation armored vehicles, foreign experts proceed from the fact that the potential capabilities of diesel development have still not been exhausted. Therefore, parallel with the development of the adiabatic [diesel] engine they are examining the prospects of further augmentation of traditional diesels. They propose the introduction of more effective combustion processes and the use of the latest achievements in the area of materials development and production technology to achieve high specific indicators.

A great deal of attention is being devoted to improving the gas turbine supercharger system. New turbocompressors are being designed with high values for the degree of increased air pressure in the compressor and efficiency factor. According to experts, a turbine with a regulating nozzle device (RSA) may be used to improve the diesel's characteristics during partial load modes, that is, to coordinate the consumption characteristics of the diesel and the turbocompressor. They are studying the possibility of improving the diesel's characteristics and transition processes by employing a turbo supercharged system with a changed quantity of the functioning turboprocessors (a "register" turbocharged system). This

Piston Design for a Diesel with a Changed Compression Ratio: 1. internal piston; 2. lower chamber valve; 3. upper chamber valve; 4. external piston head; 5. relief valve; 6. lower chamber.



permits optimization of supercharger pressure depending on the engine's operating modes. Furthermore, the compression ratio will be lowered. They propose that there will be a significant increase in diesel output and at the same time the maximum level of mechanical and thermal loading will be maintained as a result.

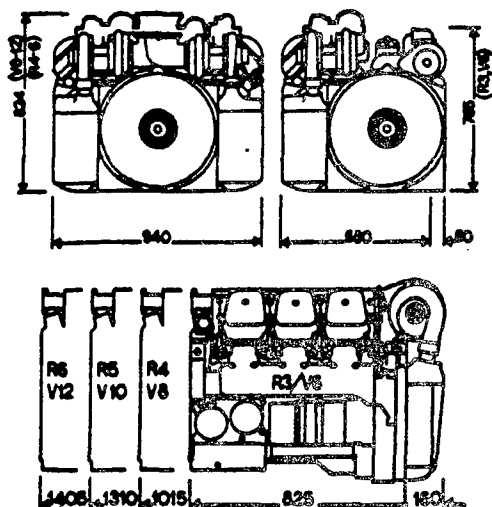
A new technical solution is a system for turning off some of the cylinders and using them to milk the operating compressed air during ignition and operation of the diesel at a cold start and under small loads with a low compression ratio ($\epsilon=8.5-10$).

High hopes are being pinned on utilization of the Hyperbar superhigh supercharged system. Its specific design features are the presence of devices that provide a blow-off of air parallel to the engine's piston portion which permits purposefully impacting its consumption in the entire range of operating modes. At the same time, the partial air blow-off system to the additional combustion chamber plays the role of a sort of supercharger unit operating mode regulator.

Distribution of the stream of air between the engine and the supercharger system and also ignition of a portion of the fuel in the supplemental combustion chamber permits a reduction of the operating range of turbocompressor (TK) rotor rotation frequency changes. Furthermore, the engine's accommodation coefficient increases and the air temperature at the input to the engine cylinders is maintained at a level that insures reliable spontaneous combustion of various types of fuel.

At the same time, experts point out that Hyperbar has a number of substantial deficiencies. One of them is the complication of gas and air lines and the increase of the number of elements of the engine's auxiliary systems

Changing a single size type diesel's dimensions depending on the number of cylinders.



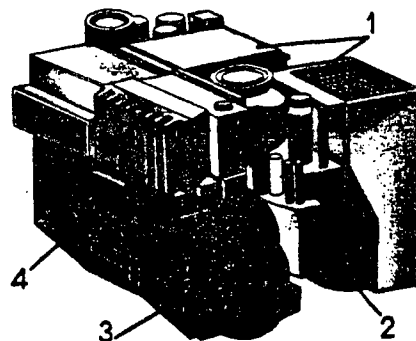
that results in the complication of the system's configuration in the limited dimensions of a tank's engine-transmission compartment (MTO). Another deficiency is the worsening of engine fuel economy under partial load modes where combustion of additional fuel in the auxiliary combustion chamber (VKS) is necessary according to conditions of receiving high accommodation coefficient values or reliable spontaneous combustion of fuel. However, despite that, foreign experts think that utilization of the Hyperbar supercharger system for tank diesels poses significant interest because it allows providing an engine with a number of valuable properties and precisely: a high accommodation coefficient ($K_m = 1.35 \dots 1.4$), acceleration during all operating modes, reliable starting under negative temperature conditions, a high level of augmentation at average effective pressure, and a favorable nature for changing the torque since supercharger pressure is maintained high even during low load modes.

Furthermore, they consider it quite important that the Hyperbar turbocompressor system can use an autonomous auxiliary gas turbine engine to drive the electrical generator while the primary engine is turned on.

It has been reported that work is being conducted to improve this system at the present time. In particular, utilization of an exhaust gas circulation system from the entry into the turbine to the input manifold instead of the auxiliary combustion chamber has been suggested to insure engine functioning during low load modes. They think that this will permit reduction of fuel consumption in the auxiliary combustion chamber and improve engine fuel efficiency in the entire range of characteristics.

Foreigners are also attempting to achieve increases in reliability and durability and improvement of diesel

Gas turbine engine power unit design variant: 1. recuperative heat exchanger; 2. air compressor; 3. transmission; 4. air cleaning system.



operating characteristics through widespread introduction of electronic control systems and diagnostics. They think that their use will increase engine fuel efficiency and pulling characteristics due to more precise control and the increase of the quantity of regulated parameters.

Development of electric drive under which the primary engine operates on an alternating current generator supplied with power by small high rpm electric motors to drive the drive shaft is another direction in the development of power plants abroad. The return to the idea of using electric drive is caused by achievements in the development of reliable electronic instruments and microprocessors for regulating systems, small generators, and engines with high specific indicators and low weight.

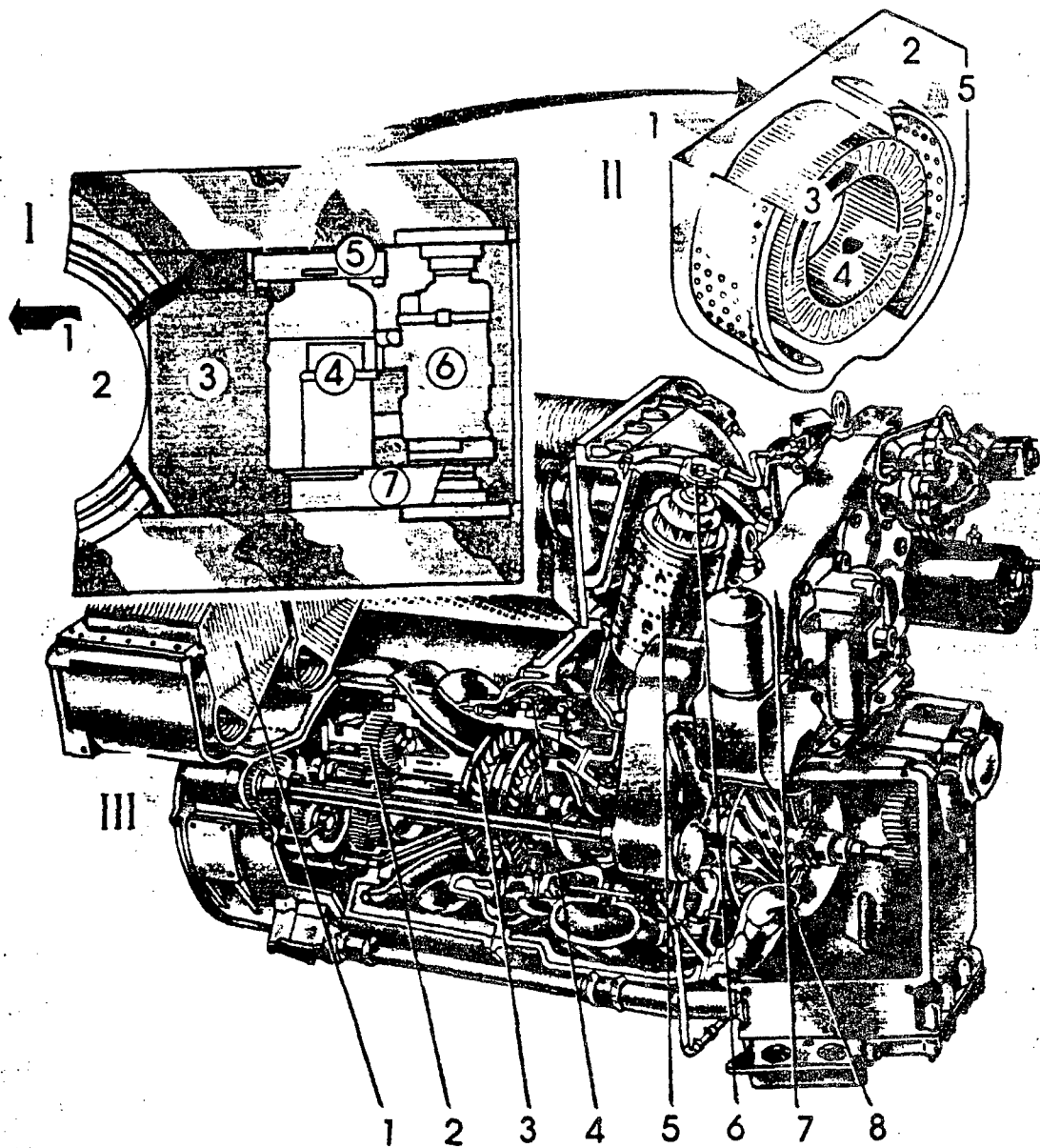
According to foreign experts, the advantage of a power plant that consists of an engine and electronic transmission consists of the possibility for a wide selection of assembly configuration variants. For example, a diesel or gas turbine engine can be installed in the front portion of a tank hull and the drive electric motors in the rear or in the wheel hubs of armored vehicles. These power plants have less transmission power loss and better pulling characteristics.

Experts assume that a power plant with electric drive while using diesel could weigh nearly 5,000 kg and be located in a 4.04 m³ engine-transmission compartment and in the turboelectric version—nearly 4,000 kg and 3.6 m³, respectively.

As has been reported, foreign experts see a rotary-piston [diesel] (RPD) engine as a variant for next generation armored vehicle power plants. At the present time, multi-fuel segregated charge rotary-piston [diesel] engines are causing a great deal of interest. [Foreign experts] think that they have advantages in contrast to existing military vehicle diesel power plants in dimensional output, height, and width.

The use of gas turbine engines is one of the fundamentally new directions of tank power plant development

TANK ENGINES



Key:

I. Transverse arrangement of a gas turbine engine in a tank engine-transmission compartment (MTO):
 —1. Toward the tank's front section;
 —2. Turret race;
 —3. Free space;
 —4. Engine;
 —5. Engine air filter;
 —6. Transmission;
 —7. Transfer case.

II. Engine air filter:
 —1. Air supply from the sponson;
 —2. Case;
 —3. Rotating section;
 —4. Cleaned air;
 —5. Preliminary cleaning.

III. Gas turbine engine for light combat vehicles:
 —1. Recuperative heat exchanger;
 —2. Reduction gear;
 —3. Power turbine;
 —4. Regulated nozzle device;
 —5. Ignition chamber;
 —6. Fuel-injection nozzle;
 —7. Transfer device;
 —8. Air compressor.

that allow, as they insist, to improve their characteristics. Foreign military experts see the possibility of their use for future tank models of 1995-2000 as a serious alternative power plant to turbo-piston engines.

Improvement of gas turbine engine power plants is being conducted along two directions: modernization of the American AGT-1500 series production engine directed at increasing its output and fuel economy indicators, and also for improvement of reliability and reduction of production costs; and, development of a new (second) generation gas turbine engine with higher operating cycle parameters, better size and weight, fuel, dynamic and technical indicators.

New tank gas turbine engines must have a two drive shaft design with a dual-stage centrifugal or axial-centrifugal compressor, with a centripetal turbine drive compressor, individual combustion chamber, dual-stage power turbine with regulating nozzle device in each chamber and with a stationary heat exchanger or without a heat exchanger.

They plan to increase the gas turbine engine's output by using dual-stage high-pressure centrifugal or axial-centrifugal compressors with a degree of pressure increase of $P_k 20$. They plan to improve fuel economy to the level that is comparable with the level of diesel fuel economy. They propose using highly effective heat exchange devices to do this with a degree of regeneration of $3ge_{3gr} = 0.7-0.85$ that have low hydraulic resistance. The maximum operating cycle temperature will also be increased (up to $T_r = 1650 \text{ K}$) due to manufacture of turbine operating wheels from super-strength alloys with directed crystallization or heat resistant powder metal and dispersion of reinforced ceramic yttrium oxides.

The gas turbine engine's dynamic characteristics, as foreign military experts assert, can be substantially improved by employing the compressor's directing device and the turbine's regulating nozzle device in each stage and automatically carrying this out using a computer.

It is thought that development of new gas turbine engines will permit a significant reduction of the motor-transmission compartment's size due to reduction of its length and height. As has been reported in the press, the comparative assessment of tank diesel and gas turbine engine motor-transmission compartments conducted by West German military experts revealed that a tank gas turbine engine motor-transmission compartment can be 48.5 percent smaller and weigh 37.4 percent less. The work conducted to find the most expedient placement of a future tank's gas turbine engine power plant demonstrated the possibility of placing it in the hull's forward section that will allow, as foreign military experts assert, to insure crew access through the rear and also automate the processes of loading ammunition into the tank.

Based on articles from the foreign press.

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Problems in Development of Simulators, Training Equipment

91UM0036A Moscow KRASNAYA ZVEZDA in Russian
11 Oct 90 First Edition p 2

[Article by Capt A. Yegorov: "A Simulator Is Not a Toy: An Attempt To Look Into the Future of Troop Combat Training"]

[Text] A conference was held at the Ground Forces supreme high command on the problems of contemporary simulator building and the production of range equipment. The measure is unique in that it was the first time in the last 30 years that it has been carried out.

As I understood in the course of the conference, there simply could be no further delay. It can be said that the situation in the Ground Forces with respect to the development of training devices is disastrous. And, in the opinion of specialists, this is explained primarily by two reasons: the lack of any one center for the management of such work and the miserable financing.

In other words, it was a matter of the failure of a cause upon which the Ministry of Defense should have counted, despite the reduction of appropriations.

Judge for yourself. The processes taking place within the country and abroad, including the growing protest of the population against different kinds of exercises and maneuvers, are increasingly complicating the repeated use of powerful weapon systems and combat equipment on firing ranges and tactical fields in a limited area. Moreover, one can only guess what these exercises might cost us even if it becomes impossible for the Americans—"at least in the next 10 years," judging by the statement of a representative of their ground forces—to provide subunits of tank units with ammunition for training fire in the previous quantity. But they learned long ago to save dollars. Their classes and firing ranges are 100 percent equipped with simulating equipment. Drivers in the armies of the NATO countries have already forgotten what a television simulator is (our current dream!) and have long worked with systems that integrate the visual situation with the help of digital computers.

But what about here? Here, as has already been stated, the situation is such that, whether we like it or not, use is made above all of standard-issue armament and equipment. This leads to a great expenditure of ammunition, fuel and lubricants, as well as large money outlays.

Lieutenant General V. Khazikov, deputy chief of the Main Directorate for Combat Training of the Ground Forces:

"The absence of a system in simulator building has clearly led also to the appearance of five different modifications of simulators for the T-64 tank, whereas there is not a single one for the T-72."

The absence of a system... How could such a thing happen? After the conference, I tried to look into this together with Major General A. Zakharov, who is head of the subdivision of the Ground Forces main staff that deals with the development of training and range equipment.

"We cannot be accused of the main thing—lagging behind world standards in military simulator building," said Aleksey Petrovich.

It became clear from the talk of the general that the subdivision he heads is just one of many components of the proposed system for the production of training devices, which essentially does not exist in the Ground Forces. One of its tasks is primarily the technical management of the developments in the defense industry. As a rule, they are complex anti-aircraft missile systems, for which a simulator frequently costs more than the combat model. And it is understandable that it cannot be less complex. Accordingly, only a plant that produces weapons can put such a simulator on the assembly line. But frequently what the troops need is not advantageous to the Ministry of the Defense Industry.

"And then the issue of the simulator may become a very long epic," says Maj. Gen. Zakharov, "just as with the system for the crew of the T-64. It lagged behind its tank by 12 (!) years and was not introduced in the troops until 1987, after the T-80 had long been in use. And the cost of the simulator of R485,000 was beyond anyone's means."

Another problem is the system of financing. It would seem that the one who provides the technical guidance must also pay for the development. Actually it is paid for by the Main Missile and Artillery Directorate, the Main Directorate for Combat Training or the Main Technical Directorate of the USSR Ministry of Defense, which allocate funds from their own budget for the development of training and range equipment. They may allocate them and they may not. As happened, for example, with the simulator for the Air Defense Forces. An experimental model of this system proved very successful in the training of the teams of automated control systems. But the first sets will not be issued to the troops in 1992. Referring to the lack of available appropriations, the Main Missile and Artillery Directorate of the USSR Ministry of Defense did not include this work in the plan for next year.

There are many such examples. And this is what happens: The corresponding directorate develops a training device for a weapon model that is just coming out. The Ministry of Defense Industry, let us suppose, does not oppose it and gives its approval for the parallel issue of a simulator. It is a matter of finances, but the Main Missile and Artillery Directorate does not give the money. The development went unused and the weapon went to the troops without the simulator. But if this had not happened, the annual operation of, let us say, a simulator for an anti-aircraft system in just one regiment would have been cheaper by R200,000. Although within a year or

two, or 12 years, it is still necessary to build a simulator. But now it is necessary to start everything from the beginning: to develop preliminary specifications and to organize lost ties with suppliers of completing.... Several times as much money is now needed.... This is a case where the miser pays twice as much.

Simulators are built along with weapon models throughout the entire civilized world. This is so that with the beginning of deliveries the troops can immediately begin to master the innovation. (For your information: The training of a motorized rifleman on standard-issue armament costs R2,187, whereas with the help of a training device it is a little more than R20.) In the search for a possible means of saving material resources going for defense and for a fundamental improvement of the quality of combat training, the expenditures of the NATO countries for the production of simulators and imitators increase from year to year. In the United States, for example, they increased fourfold just from 1986 through 1988 and amounted to \$801.2 million.

Here, as specialists note, in connection with the reduction of appropriations for orders of arms and military equipment, they are for some reason bringing about an equivalent reduction of developments and the production of training devices. For the establishment, let us say, of the most promising complex automated system intended for the improvement of the tactical training of the Ground Forces, our appropriations have been reduced to R8 million. Although, according to military economic estimates, even the R70 million recently allocated to them is too little for the efficient work of designers and industry.

The similar system of the Americans, "Simnet," has been working since 1982 and is nothing other than a working combat model with computer control. "Simnet" is capable of "running through" as many as 50 battalions a year in a complete course of tactical training.

Our funding has also been reduced for the introduction of a laser simulator of fire and engagement into the training process.

All of this shows once again that we are continuing to underestimate the importance of training devices in the reduction of the time for the mastery of arms and the cutting of expenditures for combat training. Of course, the very fact of holding such a conference is perceived as a good sign. A group of specialists has been formed who have been given the task of developing a concept for the up-to-date building of simulators in the Ground Forces with a single control center. The group was led by Major General Zakharov. What will this center represent? A permanent commission on the order of the regulations commission? A scientific-technical committee? How will it interact with the bodies coordinating the development of training devices in other service branches? And will it

interact at all, considering that the USSR Ministry of Defense has no unified coordination center for working out the technical policy for simulator building. All of this has yet to be determined. But it is already quite clear that

the future center for the management of simulator building must have financial independence and well-defined powers in relation to the Ministry of the Defense Industry.

Explanation of Postponement of Preparatory Flight Schools

91UM0044A Moscow KRYLYA RODINY in Russian
No 8, Aug 90 pp 18-19

[Article by Yevgeniy Podolnyy under the rubric "Under the Special Monitoring of the Editorial Board of the Journal": "Who Needn't Do What the Council of Ministers Says?"]

[Text] *My dear fellows! You did not see your beloved Krylyshek with the promised drawings of electric-powered aircraft in the accustomed place. But a reason for the urgent movement of the materials arose, and it concerns namely you and your future. In short, read on...*

Literally an avalanche of letters poured in to the journal's editors from young people who dream of becoming military pilots, as well as their parents. Sometimes even some like this: "Please report immediately the address of the special boarding schools with initial flight training that you reported on in the journal!"

Yes, we wrote (KR No 2, 1990) that such schools will be opened by resolution of the USSR Council of Ministers in Barnaul, Bryansk, Gorkiy, Kirovograd, Krasnodar, Krasnoyarsk, Mogilev and Sverdlovsk. There have even been encouraging advances—they are virtually ready to open in Bryansk and Krasnoyarsk (KR No 4). And suddenly, a hitch, as they say, a slip-up: the opening of the special schools, in view of the lack of the necessary funding, is being postponed indefinitely...

And the letters keep coming and coming with no end in sight. So the editors decided to investigate why this happened. First of all, what was this Decree No. 679 of the USSR Council of Ministers of 25 May 88? These words determine its undoubted benefit and significance: "For the purpose of improving the training of youth, the USSR Council of Ministers decrees the creation of eight special boarding schools for the initial flight training of 300 people each at the military aviation schools before 1 Apr 90. Class sessions at the schools should begin on 1 Sep 90. All expenses for the upkeep of the schools are borne by the state. The USSR Minfin [Ministry of Finance] affirms the statute on the special boarding schools. The medical certification of the youth in selection and in the training process will be performed by the flight-medicine commissions of the DOSAAF aviation organizations as monitored by the aviation-medicine service of the Air Force... The USSR State Committee on Public Education and the USSR Ministry of Defense will staff the boarding schools with drill and flight training staff from among the officers on active military service... The USSR Ministry of Finance stipulates the allocation of the necessary appropriations for the maintenance of the boarding schools by the councils of ministers of the RSFSR, UkSSR and BSSR starting in 1990... The USSR DOSAAF Central Committee, in conjunction with the USSR State Committee on Public Education, will provide special theoretical training and perform the initial

flight training of the students at the schools in the aviation organizations of that defense society..."

So then, all the duties were clearly distributed...

"The decree of the USSR Council of Ministers was adopted without any guarantees, it was not backed up with material resources. All are responsible, but specifically..." Col Vladimir Petrovich Vakhnin throws up his hands in a discussion at the Directorate of Higher Educational Institutions of the Air Force. "The funds should have been allocated for a dedicated purpose from the very beginning. Much was not thought through. Take Sverdlovsk: there are 350,000 students taking classes in 2-3 shifts in the schools, they are at times in a critical situation. What funds can be allocated for the boarding schools?! Bryansk ultimately refused the institution of the boarding school—there are no funds, not to mention the unfavorable ecological situation. The more so Mogilev: the radiation situation is a complicated one, can they take a boarding school?"

Vakhnin's colleague, Col Leonid Nikolayevich Pakhnin, dispelled the latest doubts in relation to the unfinished work, whatever it may be, on the part of the military department with weighty arguments: "The Ministry of Defense fulfilled everything it was charged with by the Council of Ministers in the preliminary stages—it developed a standard statute for the special boarding schools for air force higher educational institutions and presented it to the State Committee for Public Education. Our work was sent around to all the oblast military commissariats and all the military districts. We are prepared to send complete sets of uniforms and training and instructional texts to the special schools immediately."

Col Pakhnin pulls out a solid sheaf of documents.

"Here are the minutes of a meeting at the State Legal Department of the CPSU Central Committee, in which it is noted that it is namely with the participation of the leaders of air force higher educational institutions that the technical requirements for equipping the structures and accommodations were developed... Here is the Statute on Special Boarding Schools that was coordinated with the commander-in-chief of the air force, the commander-in-chief of the anti-aircraft troops and the chairman of the DOSAAF Central Committee. This document was transmitted without delay to the State Committee on Public Education on 14 Aug 89... And here is our concluding document—the deputy commander-in-chief of the air force for higher educational institutions sent a letter to the deputy chairmen of the councils of ministers of the three republics and the chairmen of the ispolkoms of the city soviets where the schools were to be opened on 10 Jan 90."

The deputy chief of higher educational institutions for the air force for political affairs, Maj Gen Avn Seleznev, has his own opinion on this score.

"The air force schools had unfortunately not taken hold at the beginning of the 1950s. They were replaced completely by the air clubs of DOSAAF," said Yuriy Pavlovich. "I myself completed the Mogilev air club and am sure that the initial flight training I received was entirely satisfactory. Everything has been far from thought out for the special schools in the current situation. Can you imagine putting 300 young men in one barracks? That would be a thousand problems for the teachers at once! They should, in my opinion, study this phenomenon more carefully, possibly do one, and only after that work out the materials for the USSR Council of Ministers decree. As for the funding, permit me to cite conclusions of sociologists and economists that are depressing to us all: 'If society spends less than 50 percent of the budget on education, it is not viable.' We are allocating just 7-8 percent for that purpose here. Isn't that the beginning of many of our misfortunes?"

It is now time to give the floor to the opponents of the military department. It was not for nothing that the ancients said "Let the other side be heard as well." An attempt to ease the situation of his own department somewhat is felt in the opinions of an official of the State Committee for Public Education, Comrade Yevdokimov—who is by the caprice of fate in the tough position of being practically the principal bearer of responsibility—but those opinions are not without foundation.

"The idea of founding a special air force school," says Vladimir Ustinovich, "was advanced by the military, while the principal mission of realizing it was for some reason placed on the State Committee for Public Education, an extremely civil and humanitarian organization. A tactical error was made, to use military language. The finances of the state committee are strained to the limit. We have a host of unfinished schools, and many teaching institutions require major rehabilitation. Unforeseen additional expenses for aiding the defense and military agencies would completely undermine our meager finances. We must spend 8-10 million rubles for each boarding school, after all. Here is a question, by the way, for some of our comrades in the leadership—couldn't we have foreseen the clear financial insolvency of the state committee sooner?"

"And by the way, the Ministry of Defense could have taken on the main expenses—they are cutting back the armed forces, including the air force. The system of military schools is being re-organized. The Ministry of Defense has every opportunity to create several boarding schools for the air force using the military schools that are being cut back or re-organized in this climate. It also has eight Suvorov academies under it. It seems that half of those could be reconfigured into aviation schools. And an enormous financial expenditure could be avoided. But no, the whole focus of fulfilling this 'combat' mission was for some reasons placed exclusively on the civil-service state committee. The officers from the air force higher educational institutions are saying to us directly, 'We have done all of the necessary instructional work, the rest is your concern...'"

That is the opinion of the state committee, not a happy one for the readers.

The deputy chief of the Aviation Training and Air Sports Directorate of the USSR DOSAAF Central Committee, Col Korovin, displayed much more optimism in a conversation with journal staffers.

"We planned all of the necessary work in advance," said Anatoliy Yevgenyevich, "for the additional support of the airfields, a strengthening of the organizational and staff structure of the air clubs and the staffing of the services with flight, technical and instructional personnel for training the students. The defense society was in general more concerned than other organizations with the training of youth for service in the armed forces, and especially the air force. We started an experiment in 1983, accepting youth into the air-sports clubs after the 9th grade. The results were not bad. We are ready to continue to prepare personnel for the air force higher educational institutions in the future as well. But the well-known decree of the Council of Ministers on the institution of the boarding schools came out in May of 1988. We were actively involved in the work at once. The DOSAAF Central Committee appealed to the Ministry of Finance with a request to provide financing for the flight training of special contingents in the air clubs of DOSAAF. And everything went around in circles: the Ministry of Finance answered that the Ministry of Defense exclusively funded that sort of functions, it was its sole prerogative. And then some of the officials began to get irritable—fulfill the government directive, they said, period!"

Meanwhile, the order of the USSR Minister of Defense of 12 Jul 88 also had these lines, music to the ears of any true patriot: "The deputy ministers of defense of the USSR, commanders of the branches of service and military commissars... will ensure the fulfillment of the measures stipulated by the USSR Council of Ministers Decree No. 670 of 25 May 88." And further: "Render the utmost assistance in implementing... The air force and air-defense commanders-in-chief will take part in developing... Coordinate documents with the USSR Ministry of Finance before 1 Sep 89..."

Col Korovin puts literally a heap of textbooks and references on the desk as a weighty argument. Yes, you really are convinced with your own eyes that the Aviation Training and Air Sports Directors of the DOSAAF Central Committee has prepared seriously for the opening of the special boarding schools. I leaf through the richly illustrated textbooks, published on excellent paper, with interest: "A. Korovin, Yu. Novikov. Practical Aerodynamics." "A. Korovin. The Yak-52. A Pilot's Textbook." Some 18 new texts have been published in all! Anatoliy Yevgenyevich himself passionately defends the idea of creating the special schools: "There can be no doubt here. The state will have a substantial economic impact: the early professional orientation of the young, the natural and timely weeding out of poor

students, serious physical tempering and moral cultivation, a guarantee of entry into the air force higher educational institutions without exams..."

The "act of surrender" looks incomprehensible and strange. You can't call the document anything else. Let's get acquainted with it.

"Report note on the execution of the instructions of the USSR Council of Ministers. The USSR Ministry of Defense, State Committee for Public Education and the USSR DOSAAF Central Committee, with the participation of USSR Gosplan, further considered the question of the fulfillment of the USSR Council of Ministers Decree No. 679 of 25 May 88 on 5 Apr 90.

"We feel that the creation of such boarding schools would be the most efficient step for re-organizing the decree of the Secretariat of the CPSU Central Committee of 23 Mar 90 titled 'The Course of Fulfillment of the CPSU Central Committee and USSR Council of Ministers Decree No. 699 "The Training of Youth of Pre-Draft and Draft Age..." ' under contemporary conditions..."

Stop! Here it is, the end of an infinite bureaucratic paper avalanche. And is the result so great? The report also contains this: "Having repeatedly studied the state of affairs in the local areas, we feel it is essential to open a special boarding school with initial flight training in the city of Yeysk in 1990..."

It is not yet considered essential to open the other seven schools about which the abundant word games have been waged all these years at all levels, and it is being proposed to return to this idea (if there is any sense to it at all!) at the end of the 13th Five-Year Plan.

It is later said in this document in all seriousness that the dedicated allocation of appropriations and funds for the construction of residential and educational complexes and airfield structures must be envisaged in the creation of these special boarding schools.

Today we involuntarily have to pull back somewhat; our correspondents had gone off to various levels of authority so as somehow to get their bearings in the situation and to explain at least something to our "excessively" active readers. And not all of the leadership, of course, likes that. How can we fail to recall here the angry reply of a very respected general? Finding out about the inordinate zeal with which one of the journalists was digging into the problems of the insolvent boarding schools, he remarked in anger that "You will have to explain to the leadership why you are so passionately interested in something you shouldn't be."

He could obviously consider this piece to be an explanation. But something else is far more important—it is impossible, as some imagine, to up and command, under the new conditions, "Attention! To the special schools, quick march!" The times are different. And the problems

have proved to be far more difficult than they were assumed to be two years ago.

Taking all of these circumstances into account, when, on the one hand, there would seem to be no way out and, on the other, an "economy" of "percentages of education" is underway, the editorial board of the journal appeals to the USSR Council of Ministers, and to USSR Council of Ministers Chairman Nikolay Ivanovich Ryzhkov, with the earnest request to take part personally in the question of the most rapid possible opening of the special boarding schools with initial flight training and to support the best traditions of the aviation of the Fatherland—to aid our youth in gaining their wings.

While the issue was going to press. The journal unfortunately has a three-month publishing cycle. Editor-in-chief Sergey Levitskiy, by assignment of the editorial board, thus appeared on this problem in the newspaper KRASNAYA ZVEZDA (June 14). A report arrived soon afterward that special schools were opening in Yeysk and Barnaul. True, the information on the receipt of the documents before June 30 was made public only on the 24th. But the first step is always the hardest. The problems raised in the article remain.

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Performance, Specifications of Ka-27/Ka-32 Helicopter

91UM0044B Moscow KRYLYA RODINY in Russian
No 8, Aug 90 pp 27-28

[Unattributed article: "The Ka-27/Ka-32 Multipurpose Helicopter"]

[Text] The first domestic specialized anti-submarine helicopter using a co-axial contra-rotating design, the Ka-25, was created in 1961 at the design bureau headed by Nikolay Ilich Kamov and is still in use. Technical progress in the realm of aircraft engine construction, radio equipment, structural materials and aerodynamics have allowed the transition to a new generation of aircraft. The new heavy multipurpose Ka-27 helicopter, the base model for the creation of a whole family of special shipborne helicopters, has now replaced the Ka-25.

The Ka-27 is equipped with two TVZ-117 turboshaft engines of 2,225 horsepower each and distinguished by good technical-performance features. The presence of co-axial contra-rotating rotors allows it to fly at high speeds to the side and back as well as forward. This was demonstrated especially clearly during the demonstration flights of the Ka-27 at the air show in Tushino in August of 1989. It is interesting that the Ka-27, with a higher flying weight than the Ka-25 (roughly double), has the same dimensions. The internal volume of its fuselage has become much larger.

The Ka-27 helicopter is equipped with a system for stowing the rotors on the hardstand and emergency

inflatable pontoons providing for a safe landing on the water in an emergency. It is equipped with powerful radio equipment, including radar, a computer and the latest piloting and navigational systems along with special equipment.

The Ka-27PS search-and-rescue version has been created based on the Ka-27 and is intended for radio search and evacuation of cosmonauts and assisting the crews of ships and aircraft that have crashed. The Ka-27PS is equipped with all-round-looking radar, radio and illumination search equipment, attachments for evacuation (including a hoist) and means of providing first aid.

The Ka-29 armored combat-transport helicopter, intended for assault transport and fire support, has been developed from the Ka-27.

The Ka-32 civilian transport helicopter, able to ship freights both inside the fuselage and on external hangers, has also been created using the Ka-27. The shipborne version of the Ka-32 is intended for performing ice surveillance, unloading ships, servicing offshore drilling platforms and performing rescue operations. A number of world records have been set by the Ka-32. Tatyana Zuyeva reached an altitude of 8,250 meters—8,215 meters in horizontal flight—in January of 1985.

Nadezhda Yeremina reached an altitude of 3,000 meters for 2 minutes 11 seconds in January 1983, while Tatyana Zuyeva reached 6,000 meters for 4 minutes 46.5 seconds.

The Ka-25, Ka-27, Ka-27PS, Ka-29 and Ka-32 helicopters were demonstrated in August 1989 at the Central Airfield of Moscow.

Technical and Flight Characteristics of the Ka-32 Helicopter %

Length	11.3 meters
Rotor diameter	15.9 meters
Normal takeoff weight	11,000 kg
Maximum takeoff weight	12,600 kg
Freight capacity	up to 5,000 kg
Maximum speed	250 km/hr
Cruising speed	230 km/hr
Ceiling	5,000 meters
Flight range	800 km
Maximum flight duration	4.5 hours

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Western Air-Surface Anti-Radar Missiles

91UM0025A Moscow *TEKNIKA I VOORUZHENIYE in Russian No 8, Aug 90 (Signed to Press 30 Jul 90) pp 40-41*

[Article by Reserve Colonel B. Semenov, candidate of military sciences. under the rubric "In the Armies of Capitalist States": "Air-to-Surface Anti-Radar Guided Missiles"]

[Text] At the present time, the American Shrike AGM-45, Standard ARM AGM-78, and Harm AGM-88, the Anglo-French Martel AS-37, and the French ARMAT guided missiles are in the inventories of the NATO countries' armies. Furthermore, development of the American Tacit Rainbow missile and the British ALARM missile continues.

The Shrike, Standard ARM, and Martel guided missiles have been in the inventory for more than 20 years and are considered to be obsolete by foreign experts. According to their assessments, their primary deficiencies are: Comparatively low flight speed which provides the opportunity for personnel of the target's radar station to take countermeasures to disrupt the attack; the homing head's narrow operating frequency band which requires the presence of several missiles with homing heads tuned to different frequency bands onboard the aircraft.

The American Harm AGM-88A missile was accepted into the inventory in 1983. It is designed to destroy radar sites of antiaircraft missile complexes and antiaircraft artillery and early warning, ground control airborne target intercept, and weather reconnaissance radar sites. It has been reported that it is capable of destroying both continuous wave and pulse radar sites that operate in frequency tuning modes. According to the assertions of foreign experts, this missile exceeds the capabilities of the Shrike, Standard ARM, and Martel during identification, guidance and destruction of modern enemy radar sites and also exceeds their capabilities in the degree of jam resistance to electronic combat systems. Furthermore, it has a greater speed and is simpler to operate.

The Harm missile was built according to a "tilt wing" aerodynamic design. The X-shaped wing which has four sections is located on the center section and the four-fin stabilizer is on the missile's rear section. The missile consists of a homing head system, a warhead, a fuze, and wing and engine drive.

The missile's homing head is capable of reacting to radiation of radars operating in the three, five, ten, and twenty-five centimeter bands. Enemy radar signal parameters are stored in its computer memory. The received signal is compared with the parameters which permits rapid target identification. The platformless inertial system is located in the same unit with the homing head. The inertial system provides adequately high missile guidance accuracy in the event a target radar is turned on. The high-explosive fragmentation warhead is detonated by a laser fuze. The missile's wing is set into motion by battery operated hydraulic drives. It has a solid fuel engine which has launch and cruise modes of operation.

Tactical-Technical Characteristics	Name and Designation, Developing Country						
	Shrike, AGM-45A, United States	Standard ARM, AGM-78A, United States	Harm, AGM-88A, United States	Tacit Rainbow, United States	Martel, AS-37, Great Britain and France	ARMAT, France	ALARM, Great Britain
Weight, kg:							
Launch	177	630	330	450	520	540	240
Warhead	66	120	70	45	150	150	70
Maximum Firing Range, km	50	80	80	600	60	120	70
Missile Dimensions, cm:							
Length	305	450	420	250	412	390	420
Diameter	20	34	25	60	40	40	22
Primary Aircraft Platforms	F-4, F-105, A-4, A-6, A-7	F-4, F-105, A-6	F-4, A-6, A-7	B-52, F-16	Mirage III, Jaguar, Buccaneer, Atlantik, Nimrod	Mirage 2000	Tornado

At the present time, the foreign press reports that work is being conducted to improve the Harm missile. Its new version received the designation AGM-88B and has a new homing head, warhead, and engine.

The AGM-88B's homing head is equipped with a memory device that provides timely rerecording of information depending on the type of target being destroyed (previously, a programmed memory device was used that did not permit rerecording).

They assert that the AGM-88B's warhead has a radius of effect that is two times greater than the AGM-88A's missile warhead. It is armed with several thousand 5 mm diameter cube-shaped destructive elements made of tungsten alloy. It has been reported that the fragments can pierce 12.7 mm thick soft sheet steel or 6.35 mm armor plate. Deliveries of Harm AGM-88B missiles to the forces are scheduled to begin in 1990.

It has also been reported that development is being conducted on the next Harm guided missile version—the AGM-88C. The goal of further improvement is to increase its capabilities to combat next generation enemy radars. They plan to achieve this through modernization of the homing head. In particular, they plan to increase computing speed and to double the head's operating frequency range. Series production of the AGM-88C guided missile is proposed to begin in 1992.

The French ARMAT missile was accepted into the inventory in 1984. It was developed based on the Martel AS-37 guided missile and has an increased firing range and the same dimensions as the Martel. The new missile is equipped with a homing head that has improved jam resistance. France is exporting ARMAT to various countries, and to Iraq in particular.

The Tacit Rainbow missile has been under development in the United States since 1980. It has been developed using an aircraft design with a low wing and single fin tail assembly with retractable elevators. The missile's body is manufactured from fiber plastic (injection molded material) and consists of nose, center, and tail sections. A passive homing head and warhead are located in the nose section, a programmable inertial system and onboard computer in the center section, and a turbofan engine with 272 kgs [kilogram force] thrust in the tail section. The engine's air intake has been installed in the body's upper rear section which, according to foreign experts, significantly reduces the possibility of detecting the missile in the IR-band.

After launch from the aircraft, the missile completes its flight according to the program stored in the onboard computer's memory and, upon reaching the assigned area, carries out target search, identification, lock-on and attack within that area. If the missile does not detect an operating radar, it automatically goes into defensive patrol mode in the presumed target location area until it detects a target. As has been reported in the foreign press, the Tacit Rainbow guided missile can be used not only to destroy radars but also to penetrate enemy air defense systems along the flight path of combat strike aircraft. Flight testing of the missile is occurring at the present time. Its series production is proposed to begin in 1993-1994.

Work on designing the ALARM missile began in Great Britain in 1982. It consists of a homing head, warhead, fuze, engine, and parachute. The homing head has four spiral antennas installed in a foam plastic radar absorbing fairing which support operation of a four-channel, dual-cascade superheterodyne receiver and a processor to process received signals. Its operating range is 2-20 GHz. They plan to increase its operating range to

40 GHz in the future. Signals received from the target are analyzed according to frequency, pulse duration, and the radiation source's angular coordinates and output. Information about enemy radar signal parameters is stored in the missile's memory. Target identification is carried out based on results of comparing stored signal parameters with signals received by the homing head.

The high-explosive fragmentation warhead is detonated by a laser fuze in which gallium arsenide diodes that are sensitive to laser radiation are used. The missile's solid fuel engine has launch and cruise modes.

They envision three combat applications for the ALARM missile: direct attack; firing toward the target; and, entry into the target area. The aircraft radar provides target designation prior to missile launch in the first of these modes. Once target homing head lock-on is achieved, the pilot launches the missile. In the second mode, target information, including its coordinates, are transmitted from the aircraft radar to the missile which has been launched without homing head target lock-on. The missile flies according to a program to a calculated point where the homing head locks on to the target and missile homing begins. In this case, maximum firing range is guaranteed and it is limited only by the missile's fuel capability. In the third mode, after launch the missile gains an altitude of 12 km and glides with the engine shut off. The homing head begins a target search and, upon detecting the target, dives toward it. If a target is not found, the missile continues flying to a calculated point in space and deploys the parachute when it reaches it. The missile renews a target search which can continue for several minutes. At the same time, it is hanging from the parachute and is oriented vertically and downward. After the homing head locks on to the target, the parachute is ejected and the missile is guided to the target during the dive portion [of flight]. It has been reported that the ALARM missile is undergoing flight testing. They propose accepting it into the inventory in the beginning of the 1990's.

Materials from foreign publications were used in this article: "Jane's Weapons Systems", "Aviation Week and Space Technology", "Flight International", "Aerospace Daily", "Interavia Air Letter", "International Defense Review".

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'Ekran' Automated Control System for MiG-29

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in Russian No 8, Aug 90 (Signed to Press 30 Jul 90)
pp 12-13

[Article by Lieutenant Colonel P. Barybin: "The MiG-29 Aircraft: The 'Ekran' System"]

[Text] The "Ekran" automatic built-in in flight and on the ground onboard aircraft equipment test system has

been installed on the MiG-29 aircraft. It provides indication of onboard system failure signals, records equipment failures that have occurred during flight in documented form and, furthermore, controls the ground automatic test apparatus.

The "Ekran" system is functionally linked to the aircraft's onboard systems. The logic and control unit (BLU) analyses the signals received from the aircraft onboard equipment built-in test systems (VSK) and displays them on the universal signal annunciator panel with a definite priority. At the same time, it generates ground program test control signals. The logic and control unit according to a cyclogram installed in it constantly "polls" the built-in test system and individual sensors that monitor onboard equipment operating parameters according to the "operable-inoperable" principle.

The "Ekran" system can operate in self-test (SK), ground test (NK), flight test (PK), and documented test (DK) modes. Information is recorded by the system in calculation modes in alpha-numeric form on a special lavsanovyy [Soviet equivalent of Dacron] tape with a metallic covering. This provides specialists with the capability to efficiently conduct analysis between flights and to objectively assess the aircraft's technical condition. If aircraft unit or system control parameters exceed the standard or if a failure of one or several monitored units has occurred, the appropriate built-in test systems or sensors generate an electrical signal. The logic and control unit receives it and informs [the pilot] about the failure (a frame appears on the annunciator panel that signals the pilot about the failure of a certain piece of equipment).

Failure indication on the annunciator panel occurs simultaneously with switching on the dangerous mode light-button system with a flashing light and transmission of voice information. If there is no command in the voice report list that corresponds to the failure that has arisen, the voice informer transmits the "Look at 'Ekran'" command. The information on the screen is preserved until the pilot pushes the "'Ekran' call" button, the failure signal is lost, or until a higher priority signal arrives.

When the "'Ekran' call" button is pushed and there are no signals in the "queue," the frame disappears from the annunciator panel and the "Memory" annunciator panel is illuminated and it will remain on until the failure disappearance signal [is received]. A signal is called up from the memory device by pushing the "'Ekran' call" button when signals are absent in the "queue" (Furthermore, the button-light is not turned on). In the event a higher priority pulse arrives, the lower priority pulse enters the "queue," the "queue" placard illuminates, and the higher priority signal appears on the annunciator panel. The circuit is structured in such a way that, when several failure signals are present, the highest priority signal appears on the annunciator panel and the remaining signals enter the "queue." (The "queue"

placard is illuminated). The remaining signals are called up by pressing the "Ekran' call" button. Furthermore, the button-light lights up and the signal located on the annunciator panel prior to the call from the "queue" enters "memory" and can be recalled by pushing the "Ekran' call" button only after the entire "queue" has been reviewed and "memory" flashes on the annunciator panel. Reports called up from the "queue" or "memory" are printed on the tape without a time hack.

The text of the information displayed on the annunciator panel is stored in the logic and control unit's permanent memory for subsequent documentation after the aircraft lands which occurs automatically 20 seconds after the right landing gear "touchdown" signal appears. If the information the logic and control unit receives from the built-in test system and sensors does not relate to those being displayed on the "Ekran" annunciator panel, it is only stored in memory in the logic and control unit for subsequent documentation after the aircraft lands.

The "Ekran" system provides for operation in the self-test mode during which the system's primary assembly serviceability is checked using the logic and control unit. After turning on the "Akkum. bort. aerod." and "Navigatsiya" [Navigation] buttons, the "Ekran' call" button is pressed to transfer to the self-test mode. At the same time, the "Ekran" annunciator panel "failure" light does not have to light up on the face panel. Fifteen seconds after pressing the "Ekran' call" button, the frames "self-test" and "Ekran operational" should light up consecutively (when "Ekran's" assemblies are functioning properly).

When carrying out a system preflight check, "Ekran" operates in the ground test mode during which control signals are formed in the logic and control unit and are transmitted to the test devices, the sensors and onboard systems built-in test systems are polled, and text information is indexed with instructions to the operator on how to conduct manual and visual test operations. All aircraft equipment checked using the "Ekran" system is divided into two groups: Automatically tested and those requiring operator participation.

The operator conducting the aircraft systems serviceability check must complete it within the time indicated in the technical documentation. If he does not manage to conduct testing during the time allotted to him or if he does not complete prescribed operations, the inscription "apparent failure" appears on the annunciator panel and the equipment checking process is continued. This inscription is apparently evidence of an operator error. The equipment checking cycle lasts 11-12 minutes. In the event one or several system failures are detected, frames with the designation of the failed systems or units will appear in two seconds on the annunciator panel after which testing continues.

To switch the "Ekran" system to the ground test mode, you need to turn on the "Akkum. bort. aerod." and "Navigation" switches and press the "Ekran' monitor"

button. At the same time, you need to bear in mind that access to this mode occurs only in the presence of the right [landing gear] "touchdown" signal and the absence of the "Start engine" signal. In the ground test mode, "Ekran" carries out an onboard system serviceability test and logically processes the information with its subsequent presentation to the operator and documentation of test results. After completion of the test, the inscription "Onboard systems SERVICEABLE" or "Onboard systems FAILURE" will appear on the annunciator panel.

Automated onboard systems testing is conducted according to a cyclogram loaded in "Ekran's" memory. The cyclogram is structured taking into account the time required for each system tested to warm up and achieve operational mode.

Flight test mode (PK) is automatically turned on when the "start engine" button is pushed, when the right [landing gear] "touchdown" signal is removed, or when the landing gear is raised. In the flight test mode, the logic and control unit "polls" the built-in test equipment and sensors using flight test algorithms. After pressing the "Start engine on the ground" button, the frame "Dva gener. sledi vremya" [two generators, keep track of time] appears on the "Ekran" annunciator panel and the lamp-button blinks (the frame "disappears" after ground power sources are disconnected). In the flight test mode, recording of short-period failures (one second in duration) and several identical priority failures are permitted on tape with the subsequent appearance of an empty frame on the annunciator panel.

During the flight, "Ekran" transmits the required recommendations to the pilot. After their execution, an empty frame appears on the annunciator panel. All failures that have occurred in flight (after the right [landing gear] "touchdown" signal is removed) are stored in "Ekran's" memory and are documented on metallic tape 20 seconds after the "touchdown" signal appears. In the documented test mode (DK), information about onboard equipment failures and violation of flight technical limitations in flight is recorded on tape in numeric form. The data obtained are used to conduct analysis of onboard system conditions and pilot actions. Equipment failures are documented in numerical sequence as they occur. Time hacks are conducted from the moment the "Ekran" system is turned on. Both information that has been displayed on the annunciator panel and information that ended up in the logic and control unit's memory are recorded on tape. Information is presented in the form of columns of numbers that contain the numbers and times of events that occurred during flight.

When the aircraft engine control lever is placed in the "stop" position and if there are no failures, the following signals appear on the annunciator panel: "Gener. perem." (when rpm's are at 55 percent), "Gener. post." (when rpm's are at 30-40 percent), or "Obshchaya Gidro" (when rpm's are at 20-25 percent).

In the documented test mode, information is presented on tape using 16 frames. At the same time, information is recorded about the last 64 messages. If the number of messages was greater than 64, then the 65th is printed in place of the 1st message, the 66th is printed in place of the 2nd message, and so forth. If the number of messages is less than 64, then zeros are printed in the frames where there is no information. Only those failures are documented that appeared during flight test mode, that is, from the moment the "touchdown" signal is removed and transmission of the text "document." When failure signals that are located in the device's operational memory "queue" have not been presented to the pilot or if they were transmitted to him on the annunciator panel in the flight test mode, they will be recorded in the documented test mode.

When a failure signal periodically appears during the flight test mode in the documented test mode, the failure signal (and the time of the signal's appearance) is recorded several times. The "Ekran" system automatically transfers to flight test mode when the print out of the 16 frames in the documented test mode has been completed.

During the "Ekran" system operating process, [technicians] inspect its external appearance and the mounting of its units once every two months. There can be no mechanical damage on its outer housing or violations of its coat of varnish. If deformations are discovered on their housings, the units must be replaced. The cleanliness of the inspection window is inspected with the same frequency and if it is dirty it is wiped with flannel dipped in alcohol. The condition of the logic and control unit and the annunciator panel mounting are carefully checked (the cap screws are tightened as required), and also the plug connections of the electrical lines and units (the screws must be tightened and secured against rotation and the connections firmly connected and secured against rotation).

The amount of tape remaining in the cassette must also be checked after "Ekran's" operations in the ground test and flight test modes: It must total not less than four meters which corresponds to the red mark with the number four on the cassette's feed reel. The end of the tape is determined by the moment the annunciator panel automatic shut off lamp illuminates.

When a full cassette is loaded, the [technician] must be careful not to damage the writing head's styluses.

Analysis of information recorded on the tape is conducted after onboard equipment ground testing is conducted while carrying out preflight preparations, after each flight, or when the aircraft is accepted into a TECh [Technical Maintenance Unit] after servicing has been completed on it.

After each flight, the specialists who maintain the "Ekran" system analyze the reports recorded during operations in the flight test and documented test modes and report the results to the aircraft crew chief and

"Ekran" System maintenance group commander. At the same time, an entry is made in the "Aircraft Preparation Log." The availability of tape must be checked during aircraft preparations for flight and after completion of a flight. Its minimal amount in the cassette must be seven meters for flight and four meters to conduct ground testing.

An outer inspection of the "Ekran" system's units and the serviceability of the built-in test equipment systems and aircraft onboard equipment must be conducted every 200 aircraft flying hours.

As "Ekran" system operating experience has demonstrated, you may encounter such malfunctions as loss of serviceability in the built-in test mode, malfunctioning placards on the annunciator panel, and false commands being transmitted to the annunciator panel (The voice system simultaneously testifies to the "Ekran" [system] failure). These failures are normally eliminated by replacing the defective unit.

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Problems of Training New Flight Officers

91UM0032B Moscow KRASNAYA ZVEZDA
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[Interview with Lt Gen Nikolay Timofeyevich Antoshkin, Hero of the Soviet Union and commander of the Moscow Military District Air Forces, by Maj S. Prokopenko: "Aviation: Not for Random People"]

[Text] **The end of the training year is not far off. For young pilots—recent graduates of military schools—it has become a time of development, maturing, and finding themselves in the role of aerial fighters. Our correspondent talked about this with Lt Gen N. Antoshkin, Hero of the Soviet Union and commander of the Moscow Military District Air Forces, who distinguished himself in eliminating the after-effects of the Chernobyl disaster.**

[Prokopenko] Nikolay Timofeyevich, how does this training year differ from previous ones?

[Antoshkin] If you assess it from the standpoint of training young pilots, one can say that it has changed substantially. That is because the level of flight training of school graduates has not always met the requirements imposed on pilots of combat regiments. Therefore, the entire burden of completing their training and retraining them has fallen on the units receiving the young pilots. This has created a great number of difficulties and inconveniences. But the main thing is that it has impeded the process of their formation and orientation.

Naturally, this situation did not suit us. Therefore, a year ago we switched to a four-phase system of training. Its essence is that instruction of future pilots now begins in DOSAAF or special schools of the Air Force. From here the most deserving are sent to pilot schools where they go through a complete training course in combat-trainer

aircraft. After graduation, the lieutenants are sent not to combat regiments but to training centers where they master the type of aircraft that they will fly in the unit. The centers train them to the level of military pilot third-class. In short, they join the fighting team already as real aerial fighters.

[Prokopenko] Does this mean that problems associated with training young pilots will be eliminated with the creation of the centers?

[Antoshkin] Of course, the centers are not a panacea. After all, they will ensure a definite, I would say, base level of flight, weapons, and tactical training of young people. However, they almost will not be able to influence an increase in the general theoretical training of young pilots, which still leaves something to be desired. After all, there is a reason that the definition "pilot minus engineer" has appeared recently, that is, not one or the other. We are not satisfied with the training of military school graduates today in such disciplines as equipment, aerodynamics, and especially practical training and tactics. After all, they are the key to successful assimilation and mastery of such modern aircraft systems as the MIG-29 and the Su-27.

Knowledge of documents governing flight safety, questions of combat readiness, management, economic, and administrative activities, and general military training leaves something to be desired. We are also concerned about the inability of young officers to work with people and the lack of ability to communicate. Obviously, the time has come to radically revise the training program of officer cadets and provide a modern, exemplary training materials base which graduates would strive to create in the units, too. You see, life begins to teach them what they have not learned in school, and the lessons are sometimes very harsh. Some just grow stronger from the bumps; others become disheartened...

Unfortunately, the realities of military life are often far from the theory taught in schools. Indeed, in what army in the world are officers forced to engage in gathering and harvesting vegetables, repair and restoration work, and construction, instead of combat training and education of subordinates? This frequently results in the officers lagging behind professionally, especially the young officers.

[Prokopenko] Nikolay Timofeyevich, it is known that the formation process of young people takes place in the units. What problems do the lieutenants encounter directly in the troops?

[Antoshkin] First of all, it is a housing shortage. Unfortunately, despite the orders of the minister of defense and the commander in chief of the Air Force on priority allocation of housing to flight personnel, we are unable to satisfy everyone. We presently have thousands of officers without apartments and in need of better housing. This problem is most critical namely for young people.

Judging from appearances, there is no hope for radical improvement in this matter in the near future. The process of withdrawing our troops from the countries of Eastern Europe will exacerbate this problem considerably. A large group of aviators have already arrived in the district. We have been forced to house them in prefabricated panel barracks reequipped as dormitories. Of course, they will receive well-equipped apartments, but this is a question of time. The Air Force command authorities are particularly concerned with the question of personnel retention.

Our state's well-known political steps have led to substantial changes in organization and establishment. An excess of flight personnel has emerged, and not just flight personnel. What is to be done with the "excess" people on whom the state has spent huge resources? The only way out of this situation is to increase staffs. But that entails a large number of problems; after all, with the excess of pilots, the aircraft fleet will decrease. This will result in a decrease in the number of flight hours logged by pilots and, consequently, a decline in the level of their training. And this will affect the young people above all.

Unfortunately, the range of problems facing aviators, including the young ones, is not limited to the housing shortage. We also are not satisfied today with the pay of service members, the organization of messing in aircrew and ground personnel mess halls, whose menus are significantly affected by the shortage of food products. In this regard, providing food products for families of service members, particularly in remote garrisons, causes special concern...

Still, despite all the everyday problems, a great deal in the formation of young officers depends on the atmosphere and moral climate of the collectives in which they end up. Just take this recent incident. Young officers arrived at one of the garrisons. The command authorities of the unit put them up in the barracks. One of my deputies who was visiting there instructed them to relocate the officers to a vacant clinic. I arrived at this unit about 10 days later. Imagine my surprise to find out that the lieutenants were still living in the barracks, and their orientation had been thoughtlessly planned. I had to intervene myself. I am convinced that concern about young officers will pay for itself many times over. It is too bad that still not all commanders understand this.

The experience, skills, and pedagogical tact of flight and squadron commanders play a large role in the formation of young pilots. In this respect, we also work quite a bit with command personnel of units receiving young pilots and give recommendations on methods of training them and planning flights. In particular, we advise taking the young people out in training aircraft in any conditions. There is also a psychological aspect here: the young pilot gains confidence in his abilities after such flights.

Incidentally, these methods are already bearing fruit. Not too long ago, Lt Valeriy Klimko, a graduate of the Chernigov Higher Military Aviation School for Pilots,

ended up in a situation in which he was forced to land at an unfamiliar airfield with strict weather minimums, although before this he had flown on his own only in VFR conditions. Nevertheless, he completed the flight successfully.

Those who work with young people should always remember that confidence is important to a young pilot. I recall my first flight in a combat regiment. They welcomed us, graduates of a higher military school for pilots, guardedly. You see, it had been 10 years since young pilots had been sent to the unit. On the first flights, the ceiling was about 150 meters and visibility was about 2 km. The minimums were strict for landing systems of that time. But, despite this, the regimental commander assigned dual instruction flights for the young pilots. We took off, practiced in the practice area, and landed. There were mistakes, of course, especially when coming in for a landing. However, at the critique the command said: "You will fly in all conditions!" His words became prophetic. I had to fly in the most varied conditions—Afghanistan, Chernobyl...

[Prokopenko] Nikolay Timofeyevich, you have gone through all levels in aviation, from an officer cadet at a military school to commander of the district air forces, and during this time you have seen more than one generation of pilots. How much do today's graduates differ from their predecessors, say, of the 1960's?

[Antoshkin] Not being afraid of being labeled as a stick in the mud, I will say that this comparison will not always favor today's lieutenants. When we graduated from school, the first question we asked on arriving at the regiment was: "When will we fly?" The desire to master the equipment as quickly as possible, to receive a proficiency rating, and to enter the ranks as a full-fledged fighter was dominant. Although we ended up in conditions that were far from hothouse conditions.

Now the first questions that some lieutenants ask are: "Where is my apartment?" and so forth...

I am also concerned by the fact that young people are seen less and less often at the stadium and the sports facility. Of course, sports is not an end in itself, but it affects the length of a flying career, especially in modern aircraft complexes...

(Incidentally, Nikolay Timofeyevich spoke of this based on his own personal experience. Entering the commander's office, I noticed athletic training equipment and weights in the corner. From all appearances, they were not for decoration. To this day the general is fit for flying duty in all types of aircraft and helicopters without restrictions.)

[Prokopenko] In your view, what is the cause of all of this?

[Antoshkin] When I enrolled in school, the competition was 7-10 people for each position. Kids were simply crazy about aviation. And how, after all, in the 15

postwar years the glory of the frontline aces had not faded and had not had time to wane. Military pilot Yuriy Gagarin also was the first to walk in space. Therefore, the prestige of the profession was the highest. But gradually the aura around it faded.

Lately there have been almost no good movies or books about aviation and pilots. Essays about people in this courageous profession have disappeared from the pages of newspapers and magazines. On the contrary, facts discrediting the army are spread with some kind of delight.

At first glance, these small things gradually, imperceptibly undermine the moral foundations. Paradoxical as it may seem, but people now know more about scoundrels, criminals, and bribe-takers than they do about real heroes. Honestly, this is an alarming symptom, especially for young people for whom the choice of moral reference points is very important.

But I think we can correct the situation. Publicizing aviation and the military pilot profession, restoring Air Force sponsorship of the Komsomol and other youth organizations, setting up special Air Force schools as quickly as possible, and expanding the network of flying clubs and DOSAAF will play its part. Measures to improve logistic support of aviators and their social protection will also be very important.

[Prokopenko] It is no secret that the Moscow Military District is still called the "Arbat" and "Capital" district. The opinion exists that, for the most part, the offspring of famous names serve here. Are you contacted very often about transferring certain people closer to their father's home?

[Antoshkin] I want to stipulate right now that the Moscow District Air Forces are a very complex structure, perhaps even more complex than the Air Forces of any other district. Not to mention that we combine fulfillment of combat, political, and VUZ tasks. So, duty here is no picnic, as some believe. We need experienced, competent people to perform complex tasks. The majority of our people are that.

I will not hide the fact that there are requests to transfer certain aviators. And if they recommend a good pilot or an excellent specialist, I favor such "favoritism," regardless of his relatives.

I will say, however, that it is frequently those whom we "go to the trouble of getting" who cause the most trouble. But, after all, such worthless people are not needed in any district, be it the Moscow or the Far Eastern. We get rid of such people, although sometimes with difficulty.

Nevertheless, their numbers are small. After all, aviation is not for random people.

Causes of MIG-29 Crash Noted

91UM0032A Moscow KRASNAYA ZVEZDA in Russian
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[Article by Col A. Manushkin, KRASNAYA ZVEZDA correspondent: "The Aces from Kubinka"]

[Text] The demonstration of Soviet aircraft for the Chinese delegation was scheduled for 1000 hours. Lt Col V. Bychkov took off in the MIG-29. It is hard to imagine what he could have been thinking about while he was demonstrating advanced aerobatics in the sky. After all, not even two hours had passed since his subordinate, deputy squadron commander and military pilot 1st class Maj S. Kirillov, had crashed not far from the airfield; the wreckage of his aircraft was still smoking.

FROM THE INVESTIGATION REPORT: "After three minutes of flying in the practice area above the airfield, the pilot executed a wingover at an altitude of 1,030 meters (1,200 meters is the minimum permissible altitude). At an altitude of 650 meters and a speed of 61 kmph in a pitch-down configuration, he decreased the angle of attack from 23.5 to 16 degrees, which was the start of the emergency. Then he increased the angle of attack to 26 degrees and the G-force to 5.75; however, he was unable to avoid a collision with the trees.

"In view of the fast-moving nature of the emergency, the pilot did not make use of the rescue devices..."

It is difficult to write about such losses. It is even more difficult to reproach a person who is no longer with us for making a fatal mistake. Such, apparently, are the dialectics of life: none of us is immune to mistakes, not even such aces as are at the Kubinka garrison. I have seen them at work many times. What they demonstrate in the skies takes your breath away. It is not without reason that Kubinka is the only airfield in the Air Force where they train experts in advanced aerobatics. For what?

It is no secret that many countries of the world are greatly interested in our country's achievements in the field of aircraft construction, including military. Many states buy our aircraft. It must be noted that the interest here is mutual. We badly need currency, especially now when the economy is in a crisis. More and more often various delegations come here and view our equipment on the ground and in the air. Last year alone, the Kubinka pilots took part in about 60 aircraft demonstrations. They are working just as intensively this year, too.

Incidentally, we are not the only ones putting on these demonstrations.

Recently I had the opportunity to see the video cassette tape "Aerobatic Teams of the World." It was a captivating film. It tells about special aviation subunits created in many countries solely for performances at various air shows, sports festivities, exhibitions, festivals, and so forth. Unfortunately, this film did not contain a single shot of our masters of advanced aerobatics. Was it by chance?

Yes, it is difficult to include the Soviet aces from Kubinka among pilots skilled in advanced aerobatics in the direct, true sense of the word. Although it should be said that up to 60 percent of their duty time still is spent on demonstration flights and training under a program of advanced aerobatics. But 40 percent is spent on normal combat training, for the regiment is a line unit.

More than 130 countries have aerobatic teams. The United States has the Blue Angels, Great Britain has the Red Arrows, and Canada has the White Storks. Among these countries are not only the leading aviation powers of the world, but also those who do not even have their own aviation industry. We are not in any way represented in the official international rating of aerobatic teams. Is it not disappointing? After all, it is not just a matter of prestige...

Let us take the Red Arrows, the squadron of the Royal Air Force of Great Britain: it has a status determined by the minister of defense. They take pilots with 10 years of experience based on a competitive selection. Each year they select three people from approximately 60 candidates. And the Red Arrows themselves make the final selection. There is a reason for this. The problem of psychological compatibility is solved in this way: to whom, if not the pilots themselves, is it more apparent who next to them, wing to wing, will be able to perform advanced aerobatics? At first, they also selected the best pilots from the entire Air Force for Kubinka. But the last time this was done was 15 years ago. Now they train those who are sent here. Because of this selection situation, you now can count on your fingers the number of top-class pilots here who are capable of performing advanced aerobatics alone and in a group. Unfortunately, the majority of them quit flying after a few years due to age. It is disturbing that for the time being there is no one to pass the baton of mastery to today.

The death of Maj Kirillov bleeds like an uncompressed wound. To tell the truth, at first I had an urge to cast a shadow of blame on the "command authorities who overlooked or missed something somewhere." Perhaps they launched a person who was unprepared; perhaps they did not take safety measures? But I page through the accident investigation report once again. It turns out that all the requirements of documents governing flight safety had been observed. And it said this about the level of proficiency of the crew commander: "He was fully trained for advanced aerobatics flights in the Su-17 and Su-25. He made competent decisions in the complicated situation and acted in a timely manner and calmly. He was trained to perform this flight assignment."

Is it not paradoxical that there was a full amount of knowledge and skills and safety measures were observed, but the person dies? Here, perhaps, we cannot manage without taking into account another aspect: advanced aerobatics are still aerial acrobatics involving a special risk. It requires a person's full output and, of course, the need to be involved only in this and nothing else.

No one had relieved Maj Kirillov of his duties as an instructor pilot (I repeat: this is still a combat unit and not an aerobatic team). He spent about half of his duty time training young pilots and carrying out other combat training tasks.

I will cite a number of comparisons: in five years, Maj Kirillov had made 300 flights performing advanced aerobatics. The aces from the British Red Arrows team make the same number of flights in one year. I do not intend to draw parallels and link the accident to this directly, but you cannot escape the facts: the Red Arrows have lost only one pilot in the last 10 years. Losses at Kubinka were three men just in one year and four months...

Pilots serve in the Red Arrows aerobatic team for three years. They believe that a person must not engage in advanced aerobatics for longer than that. It is not just that the loads on an organism are enormous and that the pilots each lose several kilograms of weight after each flight and leave the aircraft wringing wet. There also exists the notion that people get accustomed to risk. After a few years, the sense of danger becomes deadened in a pilot skilled in advanced aerobatics; he sort of becomes used to it and does not feel it. One detail: Kirillov, located at the upper point when performing the advanced aerobatics, reported (apparently without looking at his instruments) that his altitude was 1,200 meters. Actually, (and this was recorded impartially by the objective monitoring equipment) his altitude was 170 meters less. Alas, unlike many countries of the world, we not only do not have a selection system for "pilots skilled in advanced aerobatics," but we also do not have scientifically founded criteria for replacing them. Each flies as much as he can, and this "may" depend on various circumstances and is sometimes governed simply by chance.

Throughout the world they value unique people. I would not be stretching it to include the aces from Kubinka among such unique personalities. And it is not just a matter of their talent, professionalism, and high flying skills. The people actually destroy their health and sometimes, as we see, their lives, too. But there is no additional pay for the super-complexity of their work. (Abroad, the pilots skilled in advanced aerobatics are paid very highly for each flight.) In our country, as the pilots say, at best they "shake a clammy hand." And sometimes this does not happen. When a comrade dies, they are even forced to pass the hat in the garrison to come up with funds for a funeral. I have not even mentioned such "trifles" as problems with family passes to sanatoria or rest homes, or problems with housing. When the Japanese were shooting a film about Kubinka, they needed an episode on the life and daily routine of the aviators. They began trying to find an apartment where they could take shots without disgracing themselves before the "decadent capitalists." Not a single pilot had a suitable apartment.

What an awkward position our aces find themselves when they fly abroad to demonstrate the achievements of the USSR in the field of aircraft construction! They demonstrate the equipment brilliantly, captivating the entire world; however, they themselves had to try to find a raincoat and have their flying suits sewn at cooperatives at a high price so they could "appear before people." Although their wages are not at all high, they even have to buy their own badge of the state symbol (the USSR Seal, for example, for R9). What would they think abroad if we cannot receive foreign guests like we should. One time foreigners, after shooting advanced aerobatics maneuvers and cracks in the runway, walked on our bus, which was worn out by the bad roads and time, and were squeamish about sitting in the seats, they were so dirty and dilapidated.

Yes, we know that the country has no "extra" money. But what if we let the aviators earn the money themselves? All flying teams of the world not only recover their own upkeep, but they make a huge profit. That is precisely why they strive to demonstrate their flying skills as often as they can both in their own countries and abroad. Are we worse than them? Can't we (or don't we want to) take money where it seemingly would swim to us? One aviation company offered Kubinka \$1 million to shoot a video about our masters of advanced aerobatics. But in our country you would get so bogged down just in the agreements that not a single respectable company would want to deal with you...

The French Normandy-Neman Squadron came to the unit. The pilots of the regiment chipped in 25 rubles each and supervisory personnel 50 rubles each in order to put up a good show and provide the guests a kind welcome. And at the headquarters of the Moscow Military District they had to pool their resources...

Kubinka has many firsts. Major (now already in the reserves) A. Chernov performed a "knife" for the first time in a Su-17. This is a flight in which one wing panel is up, the other down, and nothing except engine thrust is keeping the aircraft in the air. Lt Col V. Shilin is considered to be the pioneer in performing a vertical loop in the MIG-29 with 90-degree turns at the ascending and descending portions of the maneuver. Lt Col A. Arestov did the same thing for the first time in a Su-27...

It is an unusual garrison with unusual people. Therefore, I feel sorry not simply for Kubinka. As the pilots say, it is disappointing for a power! After all, we are presenting to the world what little our country can be proud of—domestic aviation.

Three PVO Regiments Experiment With Professional Manning

91UM0042A Moscow KRASNAYA ZVEZDA in Russian
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[Interview with Colonel General V. Litvinov, first deputy commander in chief of the Air Defense Forces, by

Lieutenant Colonel N. Poroskov; place and date not given: "What the Experiment Will Show"]

[Text] **Not exactly ordinary competition for the title of the best combat crew was held at the air defense training area. The special feature was that the crews were made up entirely of officers. What was the reason for this? What was the objective of the organizers of the competition?**

The conversation of our nonstaff correspondent Lieutenant Colonel N. Poroskov with Colonel General V. Litvinov, first deputy commander in chief of the Air Defense Forces, began with these questions.

[Litvinov] The very successful principle of "Do as I do!" was also well known in the times of Suvorov and Zhukov. Unfortunately, today some commanders have interpreted it as "Do as I say!" In war, the winner is the one who himself is able to fight and can train others to do this. Try to imagine a nonflying commander of an air regiment or a division commander who is not prepared to take the place of a weapon operator. It is for this reason that the competition had the primary objective of raising the professionalism of specialists of the regimental echelon and of checking how the combat crews will operate under the new strength levels.

The actions of officer crews showed that it is necessary for us to change our attitude toward tactics. Specifically, it accumulates all the elements of combat training. It is necessary to improve it, taking into account the prospective technological development and to change the interrelationship with the defense industry. I will stress that here we always tried first to proceed from the requirements of combat. But let us say frankly, that at times the defense industry dictated its own conditions. Second, in field operations it is frequently necessary to make decisions that preclude lengthy reflection. We have problems here: The realized automatism has not yet become the everyday norm in field operations.

[Poroskov] Can one say that such competition is a step toward a professional army?

[Litvinov] Actually the Air Defense Forces are already almost half comprised of professionals. This is especially true for the combat command and control echelons. The competition made it possible to determine the optimum strength level of professional crews and the least number of officers in them. This is a step forward in the development of their own ways and approaches. After all, we cannot copy other armies senselessly. Say the American Army, where a different means of recruitment is applied and a huge number of civilians is employed in troop support. The reality is that we have a self-service army.

As a person who has served at many command levels, I can say that a professional army is my dream. Even a platoon of professionals is a completely different structure. But a person must be paid for his labor. There is something insulting about inadequately remunerated labor. I am not even talking about the fact that in units with a reduced personnel level an officer works for two

and sometimes for three. The picture is the same in combat subunits with an incomplete level of manning. It is also necessary to consider some other aspects. Will we find, let us say, enough people willing to serve on the edge of the polar ice or in the desert? In other words, we have to bargain with the professional; such is the market.

Nevertheless, I am confident that in the future army most of the officers, warrant officers, and soldiers will be guided primarily by the interests of the Fatherland, will serve faithfully and truthfully, and will not measure their military duty only in terms of money.

[Poroskov] How do you see the professionalization of the Air Defense Forces? Is theirs a concept of a transition to new structures?

[Litvinov] It is well known that the Army is organized and formed for a particular enemy. This is one of the principles of defense doctrine. On this basis, we worked out and are performing an experiment in three regiments. How does this look in practice?

Let us take warrant officers. Some units are 40 percent short of them. They are all in need of housing. We tried to eliminate this deficiency in the experimental units.

Soldiers and sergeants after six months of service and the passing of an examination may sign a contract for two or three years and extend it if they wish. The mandatory condition is a half year of training immediately after signing the document. They may live in a dormitory, but it is not forbidden for them to live at home if it is not far from the garrison. Their leave is the same as for officers and warrant officers.

Of course the training program has been changed, taking into account the higher professional level. Many standards have been reexamined.

Besides raising combat readiness, the new program promises other advantages: maximum use of the possibilities of technology and a reduction of accidents and breakdowns, as well as losses of property. A system of fines is aimed at this. Not by regulations alone, so to speak....

Of course it is difficult to find faultless forms of manning immediately. But I think that by the end of next year it will be possible to increase the number of units brought into the orbit of the experiment.

As for the concept for the transition of the Air Defense Forces to the path of professionalism, we have developed this concept. There is a place in it for the future transition to new structures. I am not going to speak of details, but I will stress that we must make the emphasis of the innovations a moral principle rather than a mercantile interest.

In short, if a decision is made at the state level on the gradual transition to a professional army, we are prepared to carry it out. The question is whether the country is prepared economically.

[Poroskov] You are talking about the country as a unified whole. But our Union is now far from what it was yesterday. National (republic) armies are being established in a number of republics.

[Litvinov] I agree that what is needed is more independence, not only for the republics, but possibly for the service branches, as well. But, I cannot go along with the decision in some republics to establish their own armed formations. They are in conflict with the existing laws. But the main thing is that an army without centralization is not capable of the organized repulsion of external aggression. It is difficult to imagine, for example, republic air defense forces. Much additional time would be needed for the organization of cooperation among them.

[Poroskov] The transition to a professional army obviously also depends upon changes within the military collectives themselves. What, in your view, can be done in this connection by the lower—regimental, let us say—echelon?

[Litvinov] It is more correct here to speak of mutual coordinated actions, for junior and senior officer personnel, as well as general and flag officers serve a common objective. And the division into generals, senior and junior officers is expedient to the extent that the service requires this. Alas, by no means everyone remembers this.

And now let us imagine the subunit, the antiaircraft artillery battalion, let us say. Every day its officers and soldiers experience, on the one hand, the pressure of the radical press and television and are told that the service lacks prestige and that the army is no longer needed. On the other hand, they get pressure from superiors, who say that they did not do this or that. It reaches the point of discharge from the ranks of the armed services. Why am I saying all of this?

We in the military collectives today especially need internal unity, closeness to the people, patience and shared experiences. There is a soul under every gray overcoat. Let us not forget this. It is necessary to eliminate pressure (which is by no means synonymous with high demands) and high demands that border on insults.

And one final thing. However professional an army may be, it cannot get along without a reliable reserve. What do I mean? Let us remember how, in connection with the events in the Transcaucasus, we recently tried to call some people up from the reserves and what came of this. And how unquestioningly and at the first call thousands of American Army reservists were sent to the zone of the Persian Gulf. So it is necessary for us to work simultaneously on the establishment of a harmonious system for the training of the reserves that is not subject to the influences of the market economy.

Repeated Attacks on Air Defense Outposts

91UM0046A Moscow KRASNAYA ZVEZDA in Russian
16 Oct 90 First Edition p 2

[Article by Colonel A. Yurkin from the Air Defense Forces, under the rubric "A Look at the Problem": "Killed at One's Post..."]

[Text] As a rule, air defense (PVO) units and subunits are small, remote garrisons. Does this peculiarity attract the criminals, who attack the sentries at these outposts for the purpose of seizing weapons? According to information received from Lieutenant General G. Dubrov, commander of the PVO Radiotechnical Troops, 84 such attacks have been committed just since the beginning of this year.

However, the problem is also becoming critical for the other services and combat arms of the Soviet Armed Forces...

The following information has been made available to us:

Colonel V. Pudov, assistant section chief for routine duty activities of military personnel at the Air Defense Forces main staff, thinks that there are various motives for such crimes. But, as a rule, the reasons for the sentries' deaths are deviations from the requirements of the regulations.

Indeed, all activities of a sentry, as well as his right to use arms, are stipulated in sections of the regulations. Every person performing guard duty is obliged to know them—without this knowledge he simply will not be able to perform his mission. Are commanders doing a poor job of cultivating a heightened vigilance among their subordinates? Or is someone else to blame for the fact that the one who should not be, and whose life, honor, and dignity are protected by law, finds himself vanquished in a critical situation?

Many other people, with whom I talked, answered these questions differently, but a single thought was clearly apparent in their responses: a soldier must always remember that at all times and in all armies it has been considered shameful to be killed at one's post by one's own weapon.

Usually, those who do not consider the fulfillment of duty requirements an obligatory matter, die at their post. It is another matter if the sentry realizes the binding nature of the regulations.

Private Mikhail Tikhonov heard the sound of a motor in the night and then discerned the squeal of brakes. This alerted him. The premonition of danger was confirmed when a stranger appeared on the path leading to his position and started towards Tikhonov, not responding to hails. Then he attempted to attack the sentry with a series of karate moves. Just then a shot resounded. And it proved to be fatal for the attacker. He was wounded and forced to surrender. Captain N. Kanonenko and Junior Sergeant I. Dedytskiy rushed to Tikhonov's aid.

The detainee—he turned out to be a certain Yu. Chernysh—admitted that he wanted to seize weapons. At one time he had served in this unit. He was called to account for stealing munitions. As it turned out, the seeker of weapons was simply hoping that he would manage to meet with his former fellow servicemen and distract them with conversation before the attack.

Senior Warrant Officer Grigoriy Ivanovich Laukert, the commander of the security platoon at one of the units in the Air Defense Forces and an astute psychologist, and I analyzed this incident at great length. Having noted the resoluteness of the sentry, my interlocutor at the same time remarked that far from all guards are capable of using weapons so decisively. For many people the phenomenon of a certain "pacifism" snaps into action in crucial situations: it is impossible for the attack to be "real"... This dulls the sense of impending disaster, the moments allotted for defense vanish, and the denouement approaches...

In Laukert's opinion, automation, the improvement of barriers, and any other measures aimed at providing security and defense of military installations should only assist the sentry in the performance of his duty. They will never be able to replace the sentry himself. But he himself—the person with the assault rifle—is changing from year to year. It is alarming that recent drafts are bringing people into the military units, who can be briefly described as wishy-washy. So that the officers, who bear the full brunt of responsibility for guard duty and for the life of each sentry, are having a very rough time. Can we pin our hopes on the fact that a soldier, finding himself under fire from attackers, will correct his pattern of behavior? It seems this is an acknowledgement of the inevitability of losses during peacetime. Even the extreme situation described here brings about corrections only under the condition that the complement of guards is not only prompted to vigilance, but more importantly—that they are taught how to perform their duty.

Senior Lieutenant A. Pozdnyakov, the commander of an independent radar company, and his men have been performing alert duty in the Transcaucasus Military District for two years now—under fire from rebels. The fiercest battle took place this year at the end of August, when the extremists conducted a night attack. The sentries were the first to repulse them. Even after Sergeant R. Khabibullin, the guard commander, was wounded, they did not waver. The radar troops were indeed assisted by the teams' efficient actions in accordance with the emergency order and by each person's thorough knowledge of "his own maneuver".

On the southern flank there are quite a few companies in the Air Defense Forces performing their duty under fire. Sometimes radar troops take their places near the radar screens and sometimes in foxholes. In this environment a sentry would not begin to enter into conversations with strangers nor to permit them to approach the boundaries of the radar site. Information about the killed and

wounded guards has a sobering effect even on those who in the beginning took their duties lightly. In any case, there are no instances in which a sentry was killed by his own weapon.

There is one more report. Local newspapers published this information: "Mikhail Iskanderovich Talyshkhanov, who is suspected of murdering Igor Garkavenko, a cadet, and Andrus Krooni, a taxi driver, was arrested in Kaliningrad. An assault rifle with cartridges, belonging to the cadet, was confiscated from the captive..." The court will determine burden of guilt and give him his due in accordance with the law. But it should be clear for everyone who is assuming his post that the fate of the installation being guarded and his life is in his own hands. The enemy and the criminal show no mercy—military people should not forget this.

Ethnic Clashes in Air Defense Unit Near Moscow
*91UM0062A Moscow KOMSOMOLSKAYA PRAVDA
in Russian 23 Oct 90 p 2*

[Article by A. Khokhlov: "'Ground-to-Air' Stool: PVO Units Have These Types of Weapons As Well"]

[Text] At 2340 hours the light went on and someone yelled:

"Hey! Whoever is an eagle here, come on out!"

A well-aimed stool smacked the screamer right in the face. Those who came to the "critique" understood: someone was waiting for them. One of them dove back toward the door, but turned back. A crowd was already tumbling into the doorway, armed with stakes and shovels... Knocking out glass and frames, the invaders dashed out into the darkness of the night. They were chased, thrown to the ground, and beaten with hands and feet and whatever else there was.

This is not a retelling of a low-grade video film. Everything described occurred several days ago in a PVO [Air Defense Forces] unit stationed only some fifty kilometers from Red Square.

The chief of staff smoked nervously, the political officer kept swallowing tranquilizers, and the general who had driven from Moscow told me that in 35 years of army service this was the first time he had ever run into anything like this. In the barracks, Senior Warrant Officer Kanavkin, swearing, was replacing the broken window glass. The battery First Sergeant could not be envied: three frames were fully knocked out and out of 60 stools, 55 would have to be repaired...

When chopping wood, splinters fly. How could one talk about stools when that night the most vital question of the moment being decided in the unit was the question of power. Junior Sergeant Khasan Radzhabov had saved his co-workers, officers' families living in the adjacent military garrison and the inhabitants of the neighboring village from the skirmish.

With foresight the battery's duty NCO had time to hide bayonets and knives of those on duty in a secluded place, as well as the keys to the weapons room and—while he was at it—he took the television set to the supply room, to get it further away from the dastardly action.

"I felt that something was going to happen," says Khasan.

That same "feeling" was shared by dozens of other soldiers who, like Radzhabov, were drafted in Uzbekistan. After the First Sergeant had left the barracks, around 2330 hours, they quickly dressed, put on their footgear, and "armed themselves."

The only ones who did not "feel" anything were those who came to this barracks at night from a neighboring one. The "short-lived" team was comprised of Azerbaydzhanis, Georgians, and several Russians and Ukrainians. They went in the hopes of catching the opposing side by surprise. But their reconnaissance fouled up...

The revolution in the barracks failed. The Uzbek soldiers stood up for their right to power in the military collective. They had been won it peacefully after the retirement of the Chechen soldiers into the reserves last spring, and young replacements had arrived in the unit, including some twenty persons from their home area (now, every third serviceman here is an Uzbek). This power, won peacefully, gave them a definite advantage in the service. No sergeant—much less the "dedy" [group of servicemen next closest to discharge] (may the newspaper reporters continue to profit from them)—can send a representative of a "predominant" nationality to do the dirty work. And if you are called, you are also obliged to stand up for "your own kind" without hesitation.

And no one should be offended about any live memories of specific nationalities who participated in the conflict. Indeed, it could have been other nationalities. More important is the fact that in place of one evil—"dedovshchina" [hazing of new draftees by senior ones]—the army has another: "gruppovshchina," based on nationality, where "one of our own" means to be from a given nationality, and everyone else is an "outsider."

I did not ask the unit commanders or political workers for plans or reports "on strengthening friendship and military comradeship." Probably everything is normal in this regard. The officers mouthed the standard phrases, "I didn't know" or "I didn't even think." And, in truth, they did not think and did not know. Aroused at night by the cries of their subordinates they raised their hands in dismay and stood in the path of of the howling and screaming mob...

We walked to the unit clinic. Colonel V. Terentyev and Lieutenant-Colonel A. Fedin were telling me that an officer now has to be a teacher first of all... And in the middle of the road stood a stocky major, screaming at someone:

"What are you doing here? Now, turn around and go back!"

Two guys in quilted jackets and gym shoes on bare feet silently slipped into an alley between the houses in the officers' housing area.

Seeing my companions, the major—without lowering his voice—began to rebuke those most senior in rank:

"You have allowed the personnel to become completely undisciplined! Shame on you, officers... Wasn't yesterday's battle enough for you?"

My companions were not successful in quieting down Major Boris Petrovich Dmitriyev. An officer who was serving in the neighboring unit spoke out about everything that was on his mind about them personally, about their commander, who was on leave, and about their education and training of soldiers...

Fifteen "trainees" lay in the dark tents of the medical point. Dark, due to the lack of even the most rudimentary lamps. Spots of blood could be seen through the white bandages. To determine which of them came the previous night to "seize power" in the barracks is a matter for investigation. But the majority, and this can be said definitely even right now, suffered for nothing. One was dragged from behind the wheel of a duty vehicle and hit several times with a shovel. Another was beaten up when he tried to stop the mob from breaking into his battery's area. A third was hit by a stool at the very start of the fight. During this crazy night, some got it twice: both in the barracks and during the pogrom in the medical point itself, when those lying on cots were beaten...

Major of Medical Services A. Korzhov, chief of the medical point is just glad that there were no crushed skulls or broken bones. But happier and more satisfied than everyone else put together is Junior Sergeant Khasan Radzhabov: In the morning he retrieved the keys to the weapons room from their hiding place and, in the presence of witnesses, gave them and the inventory to Colonel V. Terentyev. Khasan had done his military duty and at the same time remained true in the eyes of his fellow countrymen...

Who is commanding this unit and making decisions anyway? The colonel? The sergeant?

As I was leaving the unit I was stopped by a group of women. There were about thirty of them, maybe forty. Agitated, they told me how afraid they are to live in this military town, afraid for themselves, for their children, and for their husbands. They cried out that in the past year the unit has been reorganized four times and this is why the officers are not doing their work, but are consumed with fear about what tomorrow may bring: will there be a reduction in force? Will I be fired? They asked me to write that the army is crumbling and that no one cares.

Then an officer came up to me and said that some generals would like to speak with me. When I had arrived at the unit, one general was sorting out the reasons for the soldiers' fight. That evening two more generals arrived. "Wait a while," said the officer, "they will finish dinner and then come to talk with you." I didn't wait. It seemed to me that the servicemen's wives would make far better conversation partners for the generals.

A NECESSARY POSTSCRIPT

When this material was ready to go to press, the editorial office received a telephone call from some unit servicemen who reported the results of the "general investigation" conducted by Lieutenant-Generals S. Sapegin and V. Khokhlov, and Major-General N. Borovkov. A "Kompromat" [expansion uncertain, possibly, 'compromising material'] is being prepared against Senior Lieutenant A. Titov and Warrant Officer R. Panakhov. The officer and warrant officer are known fighters against deficiencies in the unit. The generals believe it is they who informed the editorial office about the soldiers' fight.

What is more important for the generals to clear up: the reasons for the conflict in the unit or who was the "informer" to the newspaper? The logic of the events is convincing: The most important thing for them is to dig out, roots and all, the "sedition" of glasnost. As to whether or not the soldiers are going to beat each other over the head with shovels tomorrow—well, is this really food for thought?

Wing-in-Ground Effect Craft Promoted Despite Official Indifference

914H0043A Moscow *RABOCHAYA TRIBUNA*
in *Russian* 10 Nov 90 p 2

[Article by Ye. Zemlyanikin: "Flying Over the Waves"]

[Text] Nizhniy Novgorod—Nizhniy Novgorod designers of unusual craft are voting for the market; it is the only thing that will help them to realize their dream, ruined during the years of stagnation.

Books and articles have been written about Rostislav Yevgenyevich Alekseyev, holder of the Lenin and State prizes, doctor of technical sciences, and chief designer of the Central Hydrofoil Design Bureau. Television and radio broadcasts have been devoted to him. But alas, no one has mentioned a word about the main point. That he left his creation and switched completely to a new direction of scientific and technical research. Only it has not brought him happiness and recognition yet.

Here are persons on a videotape, shown to a journalist for the first time. A strange craft that looks very much like an airplane is flying over the sea. It seems to be skimming along the surface of the water. But it is not. The lens is lowered, and the incredible becomes apparent: the strange airplane-ship is swiftly skimming

over the waves at an altitude of roughly 3 meters. It is flying over the water like a gliding albatross...

The craft nears a sloping shore. It comes up on it easily, grazes the bushes, crosses a small ditch, and then rushes over the smooth water again. R. Alekseyev is at the helm. He was testing his craft himself.

"Rostislav Yevgenyevich solved a revolutionary problem once already," says Boris Vladimirovich Chubikov, candidate of technical sciences and winner of the Lenin Prize. "With the help of a hydrofoil, we made a speed breakthrough on the water. Alekseyev entrusted the idea to his associates, but he went further himself. He was fascinated by the so-called ground effect."

I will explain. As far back as the dawn of aviation, pilots coming in for a landing began sensing a sharp increase in lift, an unexpected push under the wings. A dynamic air cushion was forming between the wing and the airport surface. Landing distance was increased significantly as a result. Rostislav Yevgenyevich saw in this phenomenon, harmful to aviation, a new way to increase speed and economy on the water. The first experimental craft to make use of ground effect made their appearance. But...

"Storm clouds gathered over Alekseyev in 1975," says D. Sinitsyn, the chief designer for hydroaerodynamics. "Rostislav Yevgenyevich was removed from his position and work on the project. Essentially only his most devoted associates, B. Zobnina and I. Shapkina, remained with him. The bureau was in shock. No one could understand what had happened."

And only later did I find out that the higher departments were not receptive to this equipment.

Perhaps because it had fallen into a "gap" between them. After all, the strange craft were a little like airplanes and a little like ships, but essentially they were neither one nor the other. So the officials in one department or another did not want to claim them as "theirs." Especially a new development, risky as it is...

Dmitriy Nikolayevich was convinced: most of Alekseyev's efforts were spent on overcoming obstacles. In the last years of his life, Rostislav Yevgenyevich, in reflecting on the reasons for the slowdown in scientific and technical progress, said: "As soon as something new is developed, an opposing force is developed at the same time. But to the extent that this new development is already approaching the area of practical conciliation, even stronger slowdown forces are turned on." He ended his conclusion with a gloomy joke: "I can't explain this by anything—only the intrigues of the CIA."

Alekseyev demonstrated his air-cushion craft in 1957. He wanted to show the most improved model at the Moscow Olympics, but...he was not able to.

But the people on the videotape are attesting to the fact that the huge craft is flying over the sea. I am able to count 10 gas turbine engines on it. This is a full-scale laboratory with a range of several thousand kilometers.

Seeing this miraculous craft flying swiftly over a 5-point sea, I really begin sensing the full truth of Sinitsyn's heartfelt words: if the fleet had had the air-cushion craft at its disposal, the crew of the Komsomolets, and obviously, the nuclear submarine itself, could have been saved. This is confirmed by B. Chubikov as well:

"Imagine, the craft is not daunted by 3-meter waves. There is nothing like it in the world. And the speed and 'versatility,' perhaps, are simply staggering. The air-cushion craft is ideally suited to conquer two elements right away—air and water."

"This took place during the testing of the full-scale laboratory," recalls Vladimir Aleksandrovich Markov, the enterprise's chief engineer and winner of the State Prize. "After the craft broke away from the water in the Caspian Sea and quickly became hidden beyond the horizon, the associates standing on the shore did not come to their senses for a long time. After it returned, many did not believe their own eyes: we thought you had flown off into space, they marveled."

"The air-cushion craft can operate not only in open water, but frozen water areas as well," says Eduard Ivanovich Privalov, chief of a department. "And what advantages does this equipment promise for geologists, oil workers, and fire services? It is no coincidence that many countries have now become interested in air-cushion craft."

What are the forms of cooperation we see here? We are now planning and building pilot models, but we are transferring series production to other enterprises. But under the conditions of tomorrow's market economy, the staff members are prepared for other conditions as well, including the development of joint ventures with foreign partners and cooperation within the framework of associations and concerns.

Unfortunately, the state investments in developing our equipment are totally inadequate today. Simply stated, we are sitting on golden eggs, but we are hatching our chicks extremely slowly.

Are we complaining? Not at all. And we do not need money. But we are asking for full—not fictitious—financial and economic independence. And we have a great deal to offer in response: classic hydrofoils, air-cushion passenger craft, and air-cushion craft for the national economy.

When asked if the collective will be able to cope with its plans, Boris Vladimirovich Chubikov sighed and said: "It will cope. Unquestionably. But I stress again, we need the freedom."

The worst disaster for a scientist is really when he sees that his developments, which are needed and important, do not receive the necessary support from the state. Perhaps if the state does not want to help, it can at least not interfere?

Discussion of Plan to Raise the 'Komsomolets'

91UM0029A Moscow PRAVITELSTVENNYY
VESTNIK in Russian No 31, Jul 90 p 12

[Article by L. Lomanov: "A Dive into the Depths: Raising a Sunken Submarine"]

[Text] The tragedy is remembered by many. It was only little more than a year ago that the nuclear-powered submarine "Komsomolets" sank in the Norwegian Sea. Raising her from a depth of more than 1.5 kilometers is extremely difficult. There essentially is no world experience in this kind of operation. It is true that the Americans have attempted to work at greater depths, but they were able to raise only pieces of a boat, not an integral unit. To solve the problem, the Government levied the task on the Rubin Leningrad Central Design Bureau for Naval Technology. Some readers, upon reading press reports that Dutch specialists will be raising the "Komsomolets," turned to the newspaper in their perplexity. Is this operation not something we ourselves can handle? Is this something worth doing in general, using up foreign exchange? Perhaps it is better to leave the boat alone. There is no use fooling with an atomic reactor, anyway. The operation is singular, so anything can happen.

Well, the questions are reasonable. To answer them, I paid a visit to specialists of the USSR Ministry of the Shipbuilding Industry. All in all, should we raise her? Note that aboard the submarine in addition to the reactor are two rocket-assisted torpedoes armed with nuclear warheads. The reactor is damped, it is true. Nevertheless, there is a reason why the "Komsomolets" is said to be an ecological delayed-action "bomb." Should she be left at the ocean bottom?

"Definitely not," said Yu. Soldatov, Main Administration deputy chief. "At the present time the radiation situation in the area of the sunken 'Komsomolets' is normal. Specialists have sampled the water and bottom soil, made measurements alongside the boat, and even tested the radiation level within the submarine."

"How were they able to do that?"

"Aboard the submarine is a rescue chamber designed to take the crew to the surface in the event of accident," explained Yuriy Iosifovich. "It carried four seamen to the surface, you will recall. Unfortunately only one was still alive. The release of the chamber left open a submarine hatch, through which it was possible to lower a radiation counter. I repeat that the radiation situation is no cause for alarm at present, but who can say with certainty that this will not change in the years ahead? The American submarine "Scorpion" also suffered an accident and sank to the bottom. The U.S. Navy insisted that there could be no radiation leakage, but several years later water samples started to indicate the presence of heavy metals. Chernobyl taught us much. A potential danger must be eliminated, even though there may be no problem for a long time. We must think in terms longer

than one day. In addition, the "Komsomolets" sank in a biologically productive area, one in which the fishing and ecology affect not only the Soviet Union, but also Norway, Sweden, Iceland, and Great Britain. There is a good reason why the Norwegians asked us to coordinate this operation with them when they learned of the project."

Arguments of an ecological nature take first place, of course, but there is another reason in favor of the effort: We must determine the cause. There understandably is an undercurrent of a dispute between the shipbuilders and the military seamen. Without going into detail, I will say that neither a completely reliable technology nor ideal crew exists. In a case such as this, anything approaching a tug-of-war is out of place.

All we can do at the present time is hazard a guess as to what caused the fire aboard the "Komsomolets." Specialists interviewed dozens of persons and reviewed all possibilities, arriving at more than 30 (!) of the latter. In explaining how the hypotheses were tested, USSR Shipbuilding Industry Minister I. Koksanov related details of this testing: "In one case, a situation was simulated; in another, special test stands were employed; in a third, operational submarines were used. That is how the circle was narrowed. The commission arrived at the conclusion that the most likely primary cause of the accident aboard the 'Komsomolets' was inflammation of electrical equipment as a result of a breakdown in the equipment control and protection devices. That could be associated with an abnormally high oxygen content in the compartment."

That reminds me of the concern that started after the launch of a Salute. The water supply system included moisture regeneration, whereby vapors formed by exhalation of cosmonauts' breath are condensed and recycled. All of a sudden, water began to disappear—the system was out of balance. The mission control center became anxious, and specialists offered various explanations. It was not a one-year affair for the station, after all; it was necessary to find the cause. "Do not worry about it, boys," said one of the engineers to calm the designers. "Just remember the high temperature at the facility before the launch. The station became bone dry and took in the moisture. Everything will be all right." That is how it happened: In a week's time water consumption and condensate production stabilized. Apparatus that operates in a hydraulic environment is designed in another way, but I believe that this occurrence is a good example of the simple idea that reality provides exceptions to any hypothesis. It is necessary to determine what occurred aboard the "Komsomolets" on that tragic day, not to find who the guilty are, but for both submariners and shipbuilders to acquire information that will enable us to improve the reliability of our Navy.

Now about why preference is given the Dutch consortium rather than domestic organizations. There were many proposals; even cooperatives offered the ministry their services. There is no point to discussing proposals that were questionable. Of those that had merit, one was

submitted by specialists working at the Higher Naval Engineering School imeni F. E. Dzerzhinskiy. A special structure would be lowered to the depth of 1.5 kilometers to grasp the submarine's hull with its "paws." Then, liquid nitrogen would be converted into gaseous form; it would be necessary to merely force out the water from pontoons and raise the "Komsomolets." However, the word "merely" is applicable in speaking of a concept. We do not have that kind of structure, nor, incidentally, do we possess experience in working with liquid nitrogen at such depths. It is a case where we could begin and complete the work only if we were equipped with fundamental and extensive scientific and technical studies.

Could we do without liquid nitrogen, simply forcing air into the pontoons? Alas! that is not so simple. Just imagine the enormous pressure existing at a 1.5-kilometer depth. How to withstand that? That is why TsNII Hidropribor's intent was to provide an underwater "factory" that would produce gas with which to inflate elastic cavities. This would be accomplished by means of chemical gas generators. Alas! we do not have even any designs of this kind of generator that could withstand a pressure of 200 kilograms per square centimeter.

In a word, there was an abundance of ideas, but their implementation was a horse of a different color. It is sad to admit, but our science and industry were not prepared to offer rapid response to fill the salvage request. Shipbuilding industry and Navy experts had no choice but to reject all domestic proposals and select as their sole consideration the proposal submitted by the Dutch deep-water operations consortium.

"The Dutch proposal is realistic, technically substantiated, and economically sensible," said L. Rezunov, deputy minister of the USSR Shipbuilding Industry. "I see three factors that tip the scales in favor of the Dutch. The consortium, which consists of five companies, owns a powerful floating crane, the two arms of which are capable of lifting a load weighing 12,000 to 14,000 tons. They intend to attach to the ends of cables a special grapple to accommodate the length of the boat. It is important to know here that the 'Komsomolets' has two hulls: a strong inner and a light outer hull. The grapple's 'paws' will dig into the hull to engage it in a tight grip."

"You still must deliver the grapple to the boat. With such a cable length, the currents will push it back and forth like a pendulum. I doubt that you will have placement lines."

"Definitely no placement lines, but there will be guide devices: television cameras, and, possibly, deep-water apparatus," explained Leonid Nikolayevich. "Plans call for using a system for homing and steering onto the boat. Mounted on the crane will be a system for holding the crane in a fixed position. This is the second advantage of the Dutch proposal. Finally, there are the cables. A system incorporating ordinary steel cables would weigh about 3,000 tons. How would we handle that amount of

weight? One of the companies in the consortium does own this kind of cable, made of a synthetic."

Leonid Nikolayevich showed me a sample. To tell the truth, it did not look very impressive. It was very flexible, I had to admit: I could twist it around one of my fingers. But it still looked like an ordinary hemp rope.

"It is anything but ordinary," explained L. Rezunov. "No wonder the company is keeping the manufacturing technology secret. The tvaron aramide fiber cable weighs only a fifth as much as a steel cable of the same diameter and strength. In a word, the Dutch consortium's proposal is the only one that is technically substantiated and that can be accomplished within the required time frame. Nevertheless, all we did so far is to sign a contract for planning of the operation. When the Dutchmen complete the planning, our specialists will once more go over all technical aspects. We wish to make certain that the operation is completely safe."

"The readers are also concerned about the cost; everyone knows that the country is experiencing a problem with foreign exchange. What will it cost?"

"Alas! I cannot answer your question: It is a commercial secret. But I will calm the readers' fears by saying that we are not asking for funds from the budget. The state will provide Rubin with foreign exchange on credit. The fact is that the contract stipulates that a joint enterprise will be formed after the "Komsomolets" is raised, with Rubin becoming a co-owner of the unique ship-lifting structure. It will be used in the future to raise sunken ships from great depths, working under contract to Soviet and foreign organizations. We researched the world market and came to the conclusion that the joint enterprise has a future. But first there will be the 'Komsomolets.'"

"When will the command 'Lift!' be given?"

"The Dutch are in a position to complete all preparatory work in short order and raise the boat in the summer of 1992."

Fire On Board Military Tanker

91UM0029B Moscow KRASNAYA ZVEZDA
in Russian 30 Sep 90 First Edition p 1

[Article by Captain 3rd Rank V. Yegorov: "Fire on Board Military Tanker"]

[Text] For more than two hours the crew of the military tanker "Dunay" fought a fire that had started aboard the vessel during her passage from Provideniye Bay to Petropavlovsk-Kamchatskiy. The seamen extinguished the flames without outside help.

Large Unit Commander Captain 1st Rank V. Kargin was aboard the ship. He assumed command of the emergency situation. It was decided to inject Freon into the engineroom. The seamen acted quickly to cover the air

vents with canvas to deprive the fire of air. They were able to eliminate all seats of the fire in a short time.

The investigating commission reached the conclusion that the most likely cause of the accident was inflammation of diesel fuel leaking from a burst line onto the exhaust manifold. No blame was attributable to the crew.

Factory Service-Maintenance Contracts for Naval Equipment

91UM0045A Moscow KRASNAYA ZVEZDA in Russian
16 Oct 90 First Edition p 2

[Article by Captain 2nd Rank V. Gora and V. Nenilin, director of the Dizelservis firm, under the rubric "The Technical Readiness of the Fleet": "Service for Warships"]

[Text] Modern shipboard equipment is so complex that experienced, skilled specialists are required to operate it. The way to extend its periods of operation without breakdowns is in coordinating the actions of the crew and workers in the specialized units from the manufacturers' plants during routine servicing and maintenance between cruises and scheduled preventive inspections of the shipboard technical systems.

The quality and durability of shipboard equipment requires capital investments not only in the design workup, the improvement of technological processes, and the use of new composite materials, but also in the development of a full-fledged maintenance facility. Especially since for the present, maintenance constitutes a considerable portion of the life cycle of equipment in our country. Experience has shown that poor or belated servicing and maintenance is frequently the cause of unscheduled and emergency repairs, which "eat up" up to 90 percent of the resources allotted to maintaining the efficiency and serviceability of equipment.

There is no doubt that extending the periods between repairs and reducing the volume of repairs depends to large degree upon the quality of servicing and maintenance during operation. And in this area a switch to service maintenance of equipment by the manufacturer's firm reveals great prospects. This practice exists throughout the world, it has been tested and shows that the relative increase in expenditures is offset by the longevity of the technical systems and the reduction of expenditures for repairs. However, this does not yet always find understanding not only in the fleets' finance services, but also in technical services. Therefore, their own experience is very important now.

At present, the Dizelservis firm, which was established at the Kolomenskiy Zavod manufacturing association, is already implementing a new form of cooperation with customers, based on the contractor's material interest in final results of its labor. In the past the fleet paid a fixed rate for each day of a factory expert's stay on the ship,

regardless of the amount and quality of the work completed. But today, having signed a contract with Dizelservis for servicing and maintenance of the diesel equipment for its whole operational life, the customer pays the bill only upon presentation of the definitive completion of a job. The contract stipulates not only the terms and volume of work, but also reciprocal responsibility. This has become possible in view of the former lead assembly shop's transition to a lease contract. The leaseholders declined moderate pay for piddling work, they saw an opportunity to be paid well for good work. And that is why they agreed to terms that were seemingly unfavorable to them. None other than this shop became the main subunit of the firm founded in August 1989.

Having assumed responsibility for the technical readiness of shipboard diesel equipment, in return the firm received the material funds it needed. The fleet, having learned its actual requirements, reduced, without detriment to the maintenance facility, the amount of spare parts ordered by 200 thousand rubles, of which the firm received 150 thousand. Wielding these funds, the firm signed a contract with the manufacturing association for the production of required spare parts only, thereby saving the fleet from unnecessary cargo.

According to testimonials from the fleets, the new form of mutual relations is yielding its first positive results: work hours are being shortened, the cost of jobs is being reduced, and worries about orders, deliveries, and storage of spare parts are diminishing.

But even this is far from everything that could significantly influence the technical readiness of warships. A quite acceptable variant would be the establishment of bases of operations by the firm, with living accommodations, industrial premises, warehouses, and their own transportation and cargo vehicles, at naval bases. It also would be good for other representatives of industry, whose participation in the servicing and maintenance of shipboard equipment is absolutely essential today, to take advantage of Dizelservis's experience.

Description of Contract Bids To Raise Komsomolets

91UM0061A Moscow KRASNAYA ZVEZDA in Russian
30 Oct 90 First Edition p 2

[Interview with Captain 1st Rank N. Koloskov, deputy chief of the Navy Search and Rescue Service, and Academician I. Spasskiy, general designer at the "Rubin" Central Design Bureau of Maritime Equipment, by a KRASNAYA ZVEZDA correspondent: "'Rubin' Implements the Optimal Variant". First two paragraphs are editorial introduction.]

[Text] More than 1,000 proposals on raising the nuclear-powered submarine Komsomolets have been received from domestic scientific research institutions, design institutions, and individual inventors. Not a single one of them is in competition with the proposal of the Netherlands Deep-Sea Operations Consortium (NKGO)....

Many KRASNAYA ZVEZDA readers continue to express bewilderment in their letters to the editor: Is it really possible that in a country such as ours we actually have not found anyone who could carry out the complex task of raising from the depths the nuclear-powered submarine Komsomolets, which sunk in April 1989? Captain 1st Rank N. Koloskov, deputy chief of the Navy Search and Rescue Service, and Academician I. Spasskiy, general designer at the TsKB MT, "Rubin" [Central Design Bureau of Maritime Equipment] respond to this question and certain others for our correspondent.

[Koloskov] We received and analyzed—partially independently and partially with the help of certain scientific research institutes—more than 1,000 proposals. I will say without tact: Many of them were of no value at all. Do me a favor; what do you think of the proposal of P. Zheleznyakov from Shatura to raise the Komsomolets using a steam engine?

But there also were some interesting schemes. One of them calls for using self-contained modules with a high lifting capacity, providing compensation for the suction forces of the object to the ground, and a lifting force using gas generation systems. Other proposals call for using catching and lifting systems. Still others call for using hydrodynamic winches and steel cables....

Specialists at the Higher Naval Engineering School imeni F.E. Dzerzhinskiy, for example, proposed an original method for raising it. Their idea was to raise the submarine using a submergible capturing device in which the lifting force would be created in the process of gasification of liquid nitrogen.

But there are quite a few serious arguments against raising the submarine. The main one is that any equipment failure during the raising can result in an accident and, taking into account the enormous amount of liquid nitrogen, it can lead to a disaster. I cannot help but recall that the Americans once tried to do something similar. But in our case the depth is 10-15 times greater and the object much heavier than in their case. Nevertheless, the attempt ended with an accident.

The Gidropribor Central Scientific Research Institute of the USSR Ministry of the Shipbuilding Industry proposed using solid propellant or other chemical gas generators, which would feed gas into inflatable elastic reservoirs. But there presently are no developments confirming the possibility of building gas generators designed for a counterpressure of up to 200 atmospheres and capable of creating about a 6,000 ton lift force....

Developments of the Nikolayevskiy Shipbuilding Institute, which proposes using composite spheroplastics to create the lifting force, are quite promising. But where do we get these spheroplastics? Domestic industry annually will produce only one-six-hundredth of the amount of spheroplastics required for raising the Komsomolets. So, this proposal is also not feasible today. In addition, their proposal is not comprehensive in nature and basically concerns methods of creating lift force.

But even the most interesting, thought-out, scientifically reasoned proposals are unacceptable in our case, for their implementation, as a rule, requires long scientific research and experimental design work. We do not have the time for that.

As far as the NDSOC project is concerned, it is based mainly on using equipment that already exists. Of course, there will still be quite a bit of work to prepare it for the raising, but as a whole the system already has visible outlines.

There is also something new in this project. In particular, it proposes using a cable made of aramid fiber (tvaron) in the winding systems of the lift device; it weighs one-fifth as much as a steel cable of equal strength and has 8-10 times greater specific strength. The production of tvaron is well organized. The NDSOC pledges to carry out all the necessary research and design work and manufacture the lift system in the shortest possible time in order to raise the nuclear-powered submarine Komsomolets in 1992.

Is it necessary to create domestic deep-sea lifting equipment? Certainly, if only because such developments can seriously stimulate the development of domestic equipment and technology. But you see, this has been called for: Back in December of last year, a decision of the USSR Council of Ministers specified measures for creating multipurpose deep-sea lifting devices. And it was the "Rubin" Central Design Bureau of Maritime Equipment that was designated as the lead organization.

As far as raising the Komsomolets is concerned, it seems that "Rubin" is implementing the optimal variant, having signed a contract with the Dutch. I had the good fortune of visiting Holland and watching our partners in action in raising the Komsomolets. I went to sea on the vessel that will accomplish the raising and observed the erection of a drilling rig. I must say that this is high-class equipment. And I have no reason to think that our partners will disappoint us and not fulfill their commitments within the stipulated time periods.

[Spasskiy] In my view, the signing of a contract on cooperation with the Dutch firm to raise the submarine Komsomolets indicates the implementation of a new approach to solving urgent world problems.

Calculations show that given certain combinations of events that could take place during the submerging of the emergency submarine beyond maximum depth, consequences are possible that effect the ecological situation and biological objects in the vicinity of the Komsomolets disaster. Particularly the appearance in the foreseeable future of radionuclides from the nuclear fissionable materials located aboard the submarine. One can expect that this will not lead to a noticeable excess of the radiation background over what is natural, but it can have an unfavorable effect on the overall biocycle. Considering the intensive use of this region by many countries for national economic purposes, one must believe

that serious economic consequences could also arise that would inevitably affect our country.

The operation to raise the Komsomolets nuclear-powered submarine is extremely complex, essentially unique. Consequently, the raising equipment must meet the most exacting demands. The most important thing is that it must be created as general purpose equipment—that is, it must be able to be adapted to raise various objects from great depths.

Thus, the task of raising the submarine determines the need to resolve multidimensional and complex technical problems. Most authors who sent in their proposals for raising the Komsomolets essentially devoted attention only to one problem, and far from the most complex one, namely creating an Archimedean (lifting) force.

Now about one predictable result of the raising operation that we are planning. Any leap in new technologies, including deep-sea ship-raising operations (in which we lag considerably), can be accomplished only thanks to a broad integration with world experience. At a recent meeting of the President's Council, when they were examining questions of conversion of the defense sectors of industry, M.S. Gorbachev criticized the defense sectors namely for poor implementation of such work methods.

These briefly are the main reasons that the Dutch proposal was accepted. The project developed, based on this proposal, meets all the requirements imposed and makes it possible to carry out the planned scenario of the most complicated—not only technically but also organizationally—operation of raising the Komsomolets in July-August 1992. It will also enable a Soviet firm to join the consortium created especially for this raising and to become the coowner of a wide assortment of unique deep-sea lifting equipment that will be suitable for use in any region of the world's oceans, both for carrying out economic tasks and for ecological tasks. The experience gained in raising the submarine will create conditions for bringing domestic technology of ship-raising to the level of modern requirements.

Changes in Term of Service Delayed in Supreme Soviet

91UM0061B Moscow KRASNAYA ZVEZDA
in Russian 30 Oct 90 First Edition p 1

[Article by Captain 1st Rank S. Turchenko, special correspondent for KRASNAYA ZVEZDA: "Are the Parliamentarians Not in a Hurry? Why the Delay in Switching to a Two-Year Term of Service in the Navy?"]

[Text] To begin with, I will cite several documents.

Recently, T. Gorshkova of Moscow addressed a letter to the USSR Supreme Soviet: They say that the congresses of people's deputies and the sessions of the USSR Supreme Soviet have more than once talked about the need to convert seamen and petty officers of the Navy to

a two-year term of service. "Why doesn't the Ministry of Defense react?" the author of the letter asks. "When can we expect a decision on this question?"

This letter was sent from the Secretariat of the Supreme Soviet to the reception room of the USSR minister of defense with the following cover letter: "We are sending for your review the statement from T. Gorshkova." From there it went to the Main Staff of the Navy. They responded to T. Gorshkova from this level of authority: "The proposals of the USSR Ministry of Defense on converting seamen and petty officers of the Navy to a two-year term of service are under consideration in the USSR Supreme Soviet."

The circle was closed. What is left for T. Gorshkova now? Write to the USSR Supreme Soviet again? We decided to help her clarify the situation, especially since the Main Staff of the Navy, the Ministry of Defense, the USSR Supreme Soviet, and our editorial office have received hundreds of letters asking: "When will the Navy switch to a two-year term of service?"

"The USSR Council of Ministers has set 1991 as the deadline for switching the Navy to a two-year term of service," said Captain 1st Rank B. Tsybenko, chief of the department of the Main Staff of the Navy directly involved in preparing draft legislative decisions concerning this. "The General Staff of the USSR Armed Forces and the Main Staff of the Navy have worked out measures making it possible to implement the transition without detriment to combat readiness. However, the appropriate legislative acts must be passed for full implementation of these plans. Without them we legally do not have the right to begin such a serious reorganization. Back on 8 February, of this year, Fleet Admiral V. Chernavin, deputy minister of defense and commander in chief of the Navy, signed a document that, in particular, stated: 'The USSR Ministry of Defense and the USSR KGB have jointly prepared proposals, effective January 1991, to reduce the term of active compulsory military service to two years for seamen and petty officers of ships, vessels, and coastal combat support units of the Navy, and maritime units of the Border Troops.'"

"The Ministry of Defense," continued Colonel A. Sergeyev, a department chief of the General Staff, "has also drawn up draft laws on making changes to the USSR Law on Compulsory Military Service. In March of this year, the documents were submitted to the USSR Council of Ministers. They were there for six months without any movement. The USSR Supreme Soviet did not receive them until September. Already they have had them for one month, and a decision is not being made."

It turns out strangely. In many of the mass media and also in the speeches of USSR people's deputies, one often hears that reform in the Armed Forces is proceeding slowly. They put the blame on the military itself. Even some USSR people's deputies write inquiries to the Ministry of Defense demanding acceleration of reform

measures. It seems that they do not know that the decision depends entirely on the Council of Ministers and, it can be said, on the parliament itself.

I called the Committee for Questions on Defense and State Security of the USSR Supreme Soviet: Is there progress on consideration of the documents? Lieutenant General (Ret) V. Makarov, a committee staff worker, responded:

"The proposals and draft laws have been reviewed in our committee and passed on to the Committee for Legislation. Unfortunately, things are proceeding very slowly. It is difficult even to predict when it will be decided. You see, it is all in the timing. A decision is needed now, or to be more precise, it was needed yesterday, as they say. It did not take us more than half an hour to discuss the question. But the Committee for Legislation has been dragging it out for more than a week...."

Apparently, the parliamentarians have other concerns. In any case, if they take another month to consider two small typewritten pages, a decision will not be made until the spring session of the Supreme Soviet. And the Navy is already in time trouble now. After all, in order to switch to a two-year term of service, it is necessary to expand the training base and organize additional capital construction, which requires appropriations. No one will give them without the "okay" of the parliament.

The conditions for conducting an experiment on service under contract were submitted to the USSR Supreme Soviet simultaneously with the draft changes to the Law on Compulsory Military Service. How much has been said at the congresses of USSR people's deputies, at the sessions of the USSR Supreme Soviet, and in the mass media about the need to switch to a professional army! But when the Ministry of Defense took a real step towards this, our parliamentarians pretended not to notice it. In any case, service under contract already has been in an illegal status for more than half a year because the parliamentarians do not have time to take up this question.

Lt. Gen. (Ret) V. Makarov emphasized that the draft laws on defense, on the status of service members, and others are also in a "frozen" state. Their consideration is being delayed by the passage of the Union Treaty, for much in the content of "military" laws depend on it.

Recently a group of officers sent a letter to KRASNAYA ZVEZDA in which they expressed their attitude toward red tape in resolving the above-mentioned problems. They ended the letter in this way: "When they accuse the military of conservatism and unwillingness in practice to carry out military reform, one cannot help but compare

the styles and time periods of resolving one and the same issue in the Council of Ministers, the USSR Supreme Soviet, and the Ministry of Defense."

Indeed, from all appearances, certain measures of military reform are being dragged out by the Council of Ministers and the USSR Supreme Soviet. And the letters that they receive asking "Why?" and "How long?" are readdressed to the military, although why should they answer for someone else's slowness?!

Naval Lyceum in Feodosiya Opens

91UM0118B Moscow KRASNAYA ZVEZDA
in Russian 24 Nov 90 First Edition p 4

[Article by Capt 2nd Rank V. Demidov, Black Sea Fleet; "From a Young Sailor's School to A Naval Lyceum"]

[Text] Our nation's first naval lyceum has been opened at former Secondary School No. 3 in Feodosiya. This is a qualitatively new level of specialized training conforming to the purposes and goals of the general education reform. Those completing the course of study at the lyceum will have acquired not only a general education, but also special training which will permit them to continue their education at Navy and naval schools, and at technical VUZs in the nation with programs with "naval" application. In accordance with this establishing principle, in addition to the general education disciplines, special subjects such as practical naval affairs, a ship's damage control system, the history of the navy, naval geography, electrotechnology and electronics will be taught at the lyceum by Navy reserve officers. The theoretical information will be supplemented with practical skills acquired from the Black Sea Higher Naval School imeni P.S. Nakhimov, on ships and in units of the Navy. Those completing the lyceum will be issued a special training certificate along with the usual secondary school diploma.

There are 75 students at the lyceum today, while the number of applicants is far greater. "Naval" education was begun at the initiative of M. Beulova, a teacher at the school, with the establishment of a naval group, followed by a young sailor's school operated on a volunteer basis.

Many of the organizational issues have basically been decided today, the training plans and class schedules are being adjusted, and a manned training vessel is being set up. There are some problems, however, for which the lyceum administration is counting on help from the Navy. Providing the lyceum students with uniforms for cash, for example, and preparing the training programs for the special disciplines.

Turkestan MD Officers Polled on Reform

9IUM0066D Moscow ARGUMENTY I FAKTY
in Russian No 43, Oct 90 p 3

[Article by USSR People's Deputy Major V. Zolotukhin under the rubric "Sociological Poll": "Officers for an Army of a New Type"]

[Text] USSR People's Deputy Major V. Zolotukhin has conducted sociological research among officers of the staff and directorate of the Turkestan Military District on the directions of impending military reforms.

The participants in the poll noted the following as being among the problems demanding immediate solution in the Armed Forces of the USSR: legal protection for servicemen (78.4 percent); providing servicemen with housing (61.9 percent); reinforcing discipline (34.5 percent); eradicating nepotism (32.5 percent); medical care (14.9 percent); and, protection against press raids (5.2 percent).

Among other problems noted were the necessity of increasing monetary support for officers under the conditions of the transition to a market economy, reform of the organizational-staffing structure of the Armed Forces and ridding the Army of functions that are not characteristic—performing construction work, gathering the harvest, etc.

Almost half of those polled (47.4 percent) considered a mixed principle for manning the Armed Forces—combining service under a contract with a draft—to be the most advisable. Some 34.5 percent favored service on a volunteer basis only. Only 17.5 percent were for manning the Army on the basis of a universal military obligation. Some 75.8 percent approve the introduction of alternative service, while 23.2 percent feel that we should not do so.

When answering a question on the possibility of creating national formations in the republics, 148 people (76.3 percent) expressed opposition to their existence. Another 5.2 percent feel that national formations should be created, while 17.5 percent would permit service by some draftees in subunits that are directly subordinate to the republics.

How do the poll participants see the future of political bodies in the Armed Forces of the USSR? Some 56.2 percent were in favor of dissolving political bodies altogether, 42.3 percent propose preserving the political bodies while altering their functions, and 1 percent favor retaining the political bodies unchanged.

In presenting their viewpoint on the functioning of political parties among the troops, 13.9 percent feel that only CPSU structures should exist in the Army; 4.1 percent, that structures should be created in the Armed Forces for all political parties existing in society; and 81.4 percent are convinced that there should be no organizational structures of any political parties at all in the Army.

Who should take up resolving issues of the legal protections for servicemen? The answers to this question were as follows: an independent bar (50.5 percent), a court (29.4 percent), the leaders of the Ministry of Defense (21.6 percent), and political bodies (5.7 percent).

The resolution of issues of social protection for servicemen should be taken up by an independent trade union of servicemen in the Armed Forces of the USSR (57.7 percent), the leaders of the Ministry of Defense (36.1 percent), and political bodies (7.2 percent).

Military Reform Said To Omit Strategic Weapons, Technology

9IUM0072A Moscow LITERATURNAYA ROSSIYA
in Russian No 40, 5 Oct 90 p 9

[Article by Candidate of Historical Sciences M. Aleksandrov: "Military Doctrine in Uncertain Perspective"]

[Text] The Defense Council session of 1 September was involved with exceedingly important issues associated with the military reform to be implemented in our country in the 1991-1995 period. The Defense Council confirmed a course of effecting radical changes in the Armed Forces in accordance with the new defensive doctrine and the related Armed Forces reductions.

Also on the agenda was the question of military-political policy, which in the perestroika years has been kept out of sight and, in contradistinction to many of the other aspects of military reform, was not given close attention by our press. In this connection, the absence of a well-considered military-technical policy in our age of advanced technology may not only jeopardize the reform proper, but also cause dangerous irregularities in our defense construction.

It is unfortunate that in all the discussions that have flared up in the country on military topics, the purely emotional, external aspect has assumed dominant importance. The issue in most discussions is reduced to a simple matter of how much to diminish the size of the Army and whether it should be converted to an all-volunteer basis. At the same time, questions relating to a scientific approach to Armed Forces construction on the present higher plane of mankind's development are, in effect, not addressed.

By the same token, consideration of contemporary trends in military-technical development tends to cancel whatever contradictions may arise, since this on the one hand leads to reducing the Army's numerical strength and to implementing professionalization on the other.

Also difficult to justify in this consideration of ways in which the country can make the change to a defensive military doctrine is the emphasis accorded the role and functions assigned to general-purpose forces. Ignored here is the simple fact that the process of determining the nature of the country's military doctrine should relegate to a position of primary importance those types of

weapons which go to make up the state's major strength. For both the USSR and the U.S., these are the strategic offensive weapons (SNV). Only they are capable of inflicting total destruction on any potential aggressor. In this connection, their name alone is an indication of the offensive nature of this category of weapons. However, the matter is not confined to that. It also has to do with the purpose of a weapon, the missions it is designed to accomplish, not from the political point of view (deterrence), but from that of the military-technical (destruction of the enemy's military assets and built-up areas). The targeting of SNVs against the other side's military infrastructure and industry—not offensive weapons—is what places them in the offensive category. The planned reductions in SNVs have no effect on the matter. There can be no talk of the defensive nature of the military doctrine of both sides, as long as they occupy a dominant position in the strategic forces structure of the USSR and U.S.

The above statement does not constitute an attempt to lay the blame on anyone for this particular situation. The development of military technology and the associated military doctrine are to a great extent an objective process. Each state seeks ways to provide for its security within the limits of military-technical capabilities existing at any given time. A switch to a defensive military doctrine is in the final analysis not an end in itself. The goal here is to assure a country's security in an optimum and inexpensive manner.

It seems to me that a resolution of the given problem may lie more in a philosophical rather than military-technical area. Here also we have as before a definite doctrinal tangle that had its origins in the deep contradictions of the defense concepts typical of the stagnation period.

If we hold to the opinion that nuclear weapons tend to prevent war, we naturally should adopt a critical approach to an SDI program, which undermines the effectiveness of strategic nuclear forces. In this case, we should acknowledge the important deterrent role played by nuclear weapons by adopting the point of view of the English and French, who are of the opinion that it is nuclear weapons that are responsible for providing Europe with more than 40 years of peace. But then what about our numerous initiatives regarding total and general elimination of nuclear weapons, including the famous program of 1986? On the other hand, if we are to look upon nuclear weapons as dangerous, offensive, and undesirable for our security, then we must welcome the American initiative in the area of strategic defense and moreover initiate our own efforts in this regard.

The above question is not yet clear-cut in our country. Soviet strategic thinking has not been capable of freeing itself of the contradictions in defense concepts from the stagnation period with their ideological postulates. Someone at one time got the idea that nuclear weapons are undesirable for us. As a result, for decades we have been striving to eliminate nuclear weapons, forgetting

that they may constitute the sole factor on which we can reliably base our security both now and in the future, even if we do effect considerable reductions in our general purpose forces.

Dogmatism also characterizes our approach to the 1972 ABM Treaty. It was responsive to the needs of that time. The reason for this was the particular level of development of military technology, one where adequate methods of combating ballistic missiles could not be created. However, as M. Thatcher so sagaciously once remarked on a visit to Moscow, "... research cannot be stopped, the same as progress in science in general cannot be stopped." Indeed, science has produced new technologies. Directed-energy weapons are being actively developed. Guidance and communications systems have become extremely advanced. It would appear that military technological development has advanced to the point where there is little probability that any fundamentally new breakthroughs will be made in the area of offensive armaments. In the dialectical contest between defense and offense, the center of gravity is shifting in favor of defensive technologies. The present scientific and technical potential has matured sufficiently to jump the gap and create fundamentally new weapons systems that are capable of accomplishing strategic defense missions.

It is true that some experts continue to place their emphasis on offensive weapons, using as their counter-argument the EMI [EMP (electro-magnetic pulse)] weapon. In this regard, it has been estimated that explosion of three of these bombs at a 100-kilometer altitude could pulverize all of Japan. However, there is little justification to look upon this weapon as a technological breakthrough. First, it is a variation of the ordinary nuclear weapon. Second, it is associated with traditional means of delivery—missile or satellite—which can be destroyed by antimissile and antisatellite systems. For these reasons, it would be unwise to plan on effective employment of the EMP weapon.

Ignoring objective trends in military technological developments, as they pertain to defensive technologies, could carry a high price. The danger lies in the fact that the United States is continuing to carry out research in strategic defense at the same time that it is reducing strategic offensive weapons. This work has advanced to the point where it can at any time exceed the limits set by the Soviet-American ABM Treaty of 1972 (if it has not already done so). The SDI is the key to understanding U.S. strategic thinking. This topic has regrettably all but disappeared from the pages of our newspapers and magazines. In this connection, there is no reason to expect that the U.S. has any intention of terminating this program or even suspending it. On the contrary, the G. Bush team has pursued this work with even more vigor by redirecting it into a pragmatic channel.

G. Bush himself declared his commitment to the SDI program back in the preelection campaign of 1988. He left no doubt as to his intentions after his election to the presidency.¹

The first practical results were obtained in January of 1990. Lieutenant General G. Monahan, who heads the SDI program, made the sudden announcement that the first phase of the SDI was to be deployed at the end of the 1990s. In this phase, it will consist of a system of numerous miniature space-based interceptor missiles designed to destroy Soviet ballistic missiles.² The system's exotic name of Brilliant Pebbles does not mask its basic purpose: To assure for the U.S., in the words of former Defense Secretary F. Carlucci, "maximum strategic advantage."³ It is expected that a decision regarding deployment of this 55 billion dollar system will be made by the American administration no later than 1992.

What does all this mean as far as the national security of the USSR is concerned? First, if we do not undertake realistic responsive efforts, deployment of the SDI will undermine the effectiveness of our strategic nuclear forces to such an extent that the strategic parity status will cease to exist. The U.S. will attain clear military superiority over us. The U.S. penchant for using force to further foreign policy ends, something that was so vividly illustrated by the intervention in Panama, will place us in a position whereby we will be forced to make concessions to whatever Washington dictates in the area of serious political matters.

The U.S. has already violated the ABM Treaty, by testing a space-based antimissile system, something that is patently prohibited by the conditions of the treaty.

The above consisted of an experiment conducted on 29 March of this year, in which a laser "position finder" was released in space "to track a missile launched from the NASA facility to an altitude of 300 miles, with the missile releasing a device that simulated a 'decoy warhead.'" In this connection, Colonel R. Ross, the head of the interceptor sensor and technology department, stated that the conditions under which the experiment was carried out did not violate the requirements of the Soviet-American ABM Treaty of 1972. One may agree or disagree with that statement, but it is crystal-clear that the so-called "position finding" by means of a highly powerful laser is equivalent to a weapon of destruction. Nevertheless, there was nothing but dead silence on our part, as if nothing special had occurred.

Could it be that the above had something to do with our having nothing with which to counter the American SDI program? The point here is that there has been no definite response to the question of how the USSR will assure its security, with the U.S. deploying the strategic defense system. The people have a right to know the effectiveness of defense facilities purchased with taxpayers' money. The absence of glasnost in an area as important as protecting the interests of the country's

safety is completely unacceptable. In this connection, this is not a matter of divulging military secrets, but rather one of informing the public about some general parameters and ideas, the way it is done in the U.S.

It seems to me that widely announced statements about some kind of "asymmetric" response to the SDI are not sufficient to produce a feeling of satisfaction. This would be reminiscent of the facile slogans of the 1930's that made us pay so dearly on the battlefields of the Great Patriotic War. Will it happen again, as it has so frequently in the past, that the people's money will be thrown into producing thousands of copies of weapons that will become hopelessly obsolete in a few years' time?

Asymmetric competition will undoubtedly cause us to lag behind even further regarding advanced military technology, since our main effort will be directed toward improving obsolescent and deadend armaments instead of developing fundamentally new and revolutionary technologies, as the U.S. is doing in the SDI program. Progress in that country is aggressive development of directed energy technology, optoelectronics, supercomputers, artificial intelligence, supersensitive sensors and optical devices, fundamentally new communications system, and others.

It is important to note that the French—not only the Americans—are active in this area. Paris is aggressively pursuing the military component of the Eureka program by urging her West European allies to participate. Plans call for research in the priority areas of powerful radars, optoelectronics, circuits based on gallium arsenide, kinetic weapons, and space.⁴

Thus, there is a danger of our lagging behind France as well as the U.S.

An asymmetric response presents further difficulties, particularly regarding strategic stability. First, it tends to undermine crisis stability, in that weapons systems intended for destroying weapons of the other side will in a crisis situation agitate for inflicting the first strike. Second, it will become more difficult to estimate the capabilities of the sides, since it will then be a question of competition between potentials that will defy comparison. This will cause apprehension on the part of both sides, compel them to provide backup protection, and lead to stimulation of the arms race. All of this will naturally affect Soviet-American relations to cause complications in the latter.

Thus, military rivalry will remain as the dominant feature of the relations.

Our orientation toward strategic defense in contradiction to the asymmetric response will take on a stabilizing role, since dominance of defense over offense in a crisis situation will not tend to result in inflicting a first strike. A race in the area of defensive systems also would not tend to exert a destabilizing influence, since with attainment of a certain density of defense there would be no point to taking this any further.

Third, the asymmetric version ignores an important threat to our security, one that can come about as early as the near future: a missile attack against our country launched by a third-world country. In this regard, according to estimates made by CIA chief W. Webster, by the year 2000 at least 15 third-world countries will be in a position to produce ballistic missiles.⁵ The Americans are taking this threat seriously. We, for some reason, do not recognize this threat, even though we are in a less favorable geostrategic location compared to the U.S.

Thus, we arrive at the conclusion that the most favorable course of action is for us to initiate our own program of creating a strategic defense system similar to the SDI. What do we stand to gain by pursuing this goal? First, we would make the change to a defensive military doctrine. Second, this would enhance our security, since it would neutralize the threat of a strategic nuclear strike on the part of both the U.S. and the third world. In this connection, both we and the U.S. will be the sole possessors of a singular defense system for a long time to come, a situation that will reserve for us a leading role in the world. Third, the attendant conditions will foster considerable reductions in our numerous general purpose forces—forces whose role will be on the wane. On the other hand, management of a strategic defense system will raise the requirement for the services of highly skilled professional operating personnel. This will create prerequisites for making a progressive change to an army based on the all-volunteer principle. Fourth, the research and development related to advanced technologies will not result in wasted funds. On the contrary, this will furnish the necessary basis for us to make a technological breakthrough into the 21st century, enabling us to keep pace with world technical progress. Incidentally, a number of results obtained by the U.S. in its experiments related to the SDI program have already been aggressively implemented into civilian industry to provide millions in profits.

It is natural that a change to the strategic situation—to what may be called **defense dominance**—will not be easy. It is obvious that we cannot do without reaching definite interim agreements with Washington, which is also true for the latter. The point to keep in mind here is that any attempt to make this change on a unilateral basis will be interpreted by the other side as a move to attain military superiority. This will generate immediate responsive measures that may not be defensive in nature. As a result, the entire structure related to strategic arms agreements will collapse, thus initiating an uncontrolled race for defensive and offensive systems. This kind of scenario is obviously unsuitable for us, as well as for Washington. For this reason, it would appear that both the USSR and the U.S. share an interest in making a smooth and balanced change to a defense dominance model, by way of strict limitations set on the steps leading thereto. In this regard, agreement should include not only the deployment phases for strategic defense systems, but also the systems locations and parameters of

proposed armaments, to assure that they are purely defensive in nature. All of the above must be included in the forthcoming talks on strategic stability that will be undertaken immediately after the signing of the Soviet-American agreement relating to reductions in strategic offensive armaments.

Footnotes

1. WASHINGTON POST, 15 November 1988.
2. TIMES, 30 January 1990.
3. Carlucci, F. "The Year 2000: Technology and National Security," Washington, 1988.
4. LES ECHOS, 6 April 1989.
5. NEW YORK TIMES, 11 February 1989.

Col Gen Shustko on Military Reform, Professional Service

91UM0031A KRASNAYA ZVEZDA in Russian
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[Article by Col Gen L. Shustko, commander, North Caucasus Military District, under the "Military Reform—Problems and Ideas" rubric: "What Will We Be Like Tomorrow?"]

[Text] In analyzing the press and various speeches dealing with military reform, a person cannot fail to notice how strongly some writers and speakers come out in favor of a "professional Army," even though no one finds the idea unacceptable. It seems to me that this is more a case where persons who approach urgent problems of military construction do so responsibly, wishing to avoid haste in this most important state matter. In general, the concept of contract service in the case of officer personnel, let us say, is fairly widespread.

The officer personnel of our district do not constitute an exception to the above. In particular, a survey carried out in units and subunits indicates that virtually every other junior officer and every fifth senior officer of the SKVO [North Caucasus Military District] accept this concept. At the same time, there is an aspect here that stands out: Almost all persons with whom I have spoken on the subject differ in their interpretation of the term "professional army." They say something on the order of "Give us and our subordinates the same pay as in the developed capitalist countries and we also will become real professionals." Thus, the assumed amount of pay overshadows everything else.

Of course, who among us—military persons—would refuse to serve in an army that would not be burdened with all the present social and personal needs problems, with suitable material compensation for his labor? However, we must deal with the realities of the present situation in the country. This evidently was the approach taken by the 28th Congress of the CPSU, which announced that the USSR Armed Forces should be built

on the principles of one-man command, exterritoriality, and a multiethnic cadre army, one drawing on the principle of combining universal military service and volunteer contract service. I believe that this principle at the present time is the only one that is responsive to the country's economic possibilities. If it is successful, it will become possible to think about something else later, when the internal market stabilizes and the national income increases.

However, let us not forget that even these first steps will require that we adopt a new approach to the training of military cadre, with emphasis on officers. It is they who will be faced with training and producing soldiers and noncommissioned officers that will decide to become professional military men. We must realize that it is one thing to train a present-day young soldier and another an adult that will take up service under contract, for five years, let us say. He will push himself to learn and do more. This being the case, what kind of commander should he have?

When I am asked about the most important personality traits that I believe an officer or a general should possess, I answer that I am most impressed when our brother exhibits deep competence and independence of thinking. Without that, there is no commander's personality. Without that, there is no point to speaking of initiative in routine service, in combat.

The existing system of training the "average cadet" in a military school seems to be geared to standardizing the personality and equalizing the intellectual abilities of young men. An instructor explains new subject matter, then the student is supposed to remember this information and "repeat" it in a seminar or examination, only to forget it for several years, until he starts his service as an officer. Whether this knowledge will become useful to him or not is another matter, since it often happens with us that theory is one thing, practice, another.

Is it possible to teach in another way? Practice shows that if the future of an army is held in high regard, interesting discoveries can be made. A Vladikavkazskiy garrison recently held a training methods assembly and an inter-VUZ [higher educational institution] seminar on problems of introducing active teaching methods into the instruction process. Participating were instructors and commanders from cadet subunits in combined arms command and anti-aircraft missile schools and USSR MVD school. I believe that one of the sessions merits discussion.

Presented for the officers on the stage of the recreation facility was a demonstration of the possibilities of insight (which translated from the English means understanding, enlightenment). A group of third-year cadets from the MVD school acted out several situations based on the course "Culture of Interrelationships Between Servicemen." They analyzed a situation that was suggested by an instructor, applying the technique of R. Granovskaya, illustrating the progress of a lesson in

social sciences, employing social and psychological skills and role playing. They concluded the unique demonstration with 15 minutes of "brainstorming" to solve the problem by means of invoking active methods of training. In this short period of time, in an environment of complete freedom and total absence of criticism from a teacher, the boys produced about 100 suggestions, with approximately one out of 10 applicable.

We are now considering how to implement these progressive little techniques in all military schools located within the district. I am sure that they will meet with success.

Someone may say to me: "Fine. We know how to improve cadet training. But what are we to do with the thousands and thousands of officers already on duty? Are we to somehow 'pull them up by their bootstraps' to meet the requirements of the times?" In my view, it is essential that we develop an integral and materially supported system of retraining commissioned cadre. We need regional centers patterned after the Vystrel courses. To prevent encumbering the government with maintenance expenses, we could utilize existing military schools. It is a fact that the applicant acceptance rate has dropped as a result of the Armed Forces reductions. There is a possibility that some of the schools will be closed. We will be less than good managers if we eliminate their training base and discharge instructors into the reserves. They must be utilized to the maximum possible extent to improve officer professional skills.

Whom are we to train, in what, and how to do it? It must be that each officer that is approved as a candidate for promotion will be required to complete a course of retraining at least six months' duration. Entrance exams would be minimal, if required at all, while final exams would definitely be mandatory. The ratings obtained could be a sort of doorway to new opportunities for the officer. In my opinion, the focus of attention in the training process would be on military instruction techniques, psychology, resolution of social and interethnic problems, computer literacy, and legal and administrative training geared to official duties of students. Also mandatory would be ethics of the military man. All in all, many of us fall short of possessing knowledge in this area.

As recently discussed in KRASNAYA ZVEZDA, a course in military economics also has a place here. What we studied in the past is passing out of existence before our very eyes. The country is adopting a market economy. Will the one-man commander, officers of staffs and rear service not require new knowledge, new experience? The point is that the troops have invisible ties to local enterprises and institutions which will change in nature under the influence of market forces. The implication is that their ties to military collectives will undergo some kind of transition. In any event, the "natural exchange" (You give us a workforce, we make up your construction deficit.) will run out of steam. But

what about supplies, provision of normal needs of personnel, communal services? We would be remiss if we were not to take all of this into account.

Why have I failed to mention specialized disciplines? First, because they can be taken care of during commanders' training in units, providing of course that the nature and methodology of this training is redesigned. Second, it will no longer be necessary to send people from one end of the country to another to attend courses, since any kind of school can be utilized to train officers in any specialty.

I would like to point out that, in my speaking of the notion of officer cadre retraining, I am not trying to reinvent the bicycle. What I am talking about already exists in the national economy; a government decree addressing this need was adopted several years ago. Various courses, schools, and permanent seminars are held at many VUZ's, with graduates and present-day specialists numbering in the hundreds of thousands.

What kind of educational process should be employed? There is an abundance of progressive techniques. The Shatalov system will be suitable; insight will be useful; classroom games will come in handy. In a word, there is a place for everything that fires a person's imagination, uncovers his creative potential, and forces him to think and act in a new way. A student's "hearing, remembering, and retelling"—that is something that must be made a thing of the past. Learning, experiencing inwardly, "trying on for size," using in one's work—these are the things that we must carry with us into the future.

What will the officer be like in the not too distant future, when military reform will recast the Armed Forces? For example, People's Deputy Major V. Lopatin sees him as a professional above politics, judging from what he has to say in one of the issues of the magazine ZNAMYA. Nevertheless, an officer cannot be something akin to an unflinching, supermodern robot.

The person of an officer—a professional defender of the Fatherland—is multifaceted, with no one facet unimportant. The more rapid the changes in society, the more careful the polishing of these facets must be.

Ministry of Defense Draft Reform Plan

91UM0135A Moscow PRAVITELSTVENNYY
VESTNIK in Russian No 48, Nov 90 pp 5-10

["USSR Ministry of Defense Draft: Military Reform Concept" by USSR Minister of Defense Marshal of the Soviet Union D. Yazov]

[Text] Any revolutionary transformation of society inevitably entails a reorganization of all state structures and adjustment of domestic and foreign policy tasks, not the least of which is military policy and military organizational development: in other words, military reform. Our country has entered that very period of its development.

Revolutionary transformations have taken in the political, economic and cultural spheres of our society, and structures of a rule-of-law state are being formed intensively. We have to legislatively incorporate and implement in practice a statewide reform unprecedented in scope and depth of transformations—the transition to market relationships in economics.

The processes which have unfolded in our country also have been reflected in and have demanded the transformation of society's entire military organization. Military reform has become an objective necessity, without which society's further movement along the path of democratization has become impossible.

Military reform presumes a broad, comprehensive program of transformations of the state's military policy and of state structures that manage the military sphere, with a clarification of their missions and functions, the incorporation in legislative measures, where necessary, and the establishment of a mechanism for ensuring national security and effective military organizational development.

I. Conditions Determining the Necessity for Military Reform

Positive improvements in the world based on the new political thinking are in the USSR's long-term interests. The new International security concept, proposed by the Soviet Union, envisages the rejection of war as a means of resolving international contradictions, gives unconditional priority to political methods of ensuring security, and proposes a cessation of nuclear testing, the elimination of nuclear and chemical weapons, intolerance of an arms race, a reduction of military potentials to the level of necessary reasonable sufficiency, the dissolution of military force groupings and a reduction of military expenditures.

Strictly following the principles of the policy which has been proclaimed, the Soviet Union initiated a relaxation of international tension and undertook a unilateral reduction of its Armed Forces by 500,000 persons, 10,000 tanks, 8,500 artillery systems and 820 combat aircraft. A treaty was concluded on the destruction of intermediate and lesser range missiles and a withdrawal of Soviet forces began from the territory of Eastern European countries. Since 1989 there has been a reduction in military expenditures and the decision was made to convert a number of enterprises of defense sectors of industry.

The new political thinking met with understanding and support throughout the world and opened up a new stage in international relations, the basic content of which was the cessation of the "cold war." The threat of a world nuclear catastrophe has been successfully averted.

A moderation of international tension and a reduction of armed forces and arms both on the part of the USSR as well as of Western countries led to the spread of an

erroneous opinion in broad public circles to the effect that a military threat in general no longer exists.

Such an oversimplified approach to evaluating the military threat cannot serve as the basis for the long-range planning of military policy and military organizational development.

In assessing the external threat to state security, it is necessary above all to separate the immediate danger of war and the military threat on a more general, long-term plane.

The immediate threat of a world nuclear missile war has been removed and a widescale military conflict between East and West is very unlikely in this historical stage. But an overall military threat will exist as long as major nuclear arsenals and powerful groupings of armed forces exist in those states with which acute political conflicts are potentially possible.

Despite the fact that our political relationships with the United States have improved considerably, much of what the United States and its NATO allies continue to do cannot help but generate our lack of acceptance, negative attitude and guardedness. We cannot help but be concerned that the United States is creating a large grouping of non-nuclear strategic offensive arms which do not fall under the Treaty on Strategic Offensive Arms and can be stationed anywhere. U.S. resolve to preserve its advantage in Europe no matter what, to modernize the tactical nuclear potential and to keep inviolable its positions on naval forces, where the United States has a three-fold superiority continues to be unshakable. To this should be added the acceleration of work on SDI, the refusal to stop nuclear testing, and the preservation of an adherence to the use of force in international affairs.

In analyzing the international situation in detail, it is easy to note that the center of international tension is shifting more and more toward third world regions; this presents a real threat that leading world countries will be drawn into a war through regional conflicts. The situation in this region is fraught with the unexpected and the possibility that local wars will develop into a conflict on a world scale. Iraq's aggression against Kuwait can serve as an example.

An intensive buildup of efforts is going on in third world countries to create their own nuclear missile and chemical potentials, especially in areas where regional tension potentially exists.

The situation that is taking shape is aggravated by the fact that countries which are making attempts to create or are creating their own nuclear weapons (Israel, Republic of South Africa, India, Pakistan) as a rule display arrogance in relations with neighboring states or are in a state of confrontation with them. The nationalistic aspirations of the leadership of the majority of these countries promote the adoption of adventurist decisions regarding the use of weapons of mass destruction. Because of this, it is impossible to exclude the possibility

that local conflicts will develop into regional ones and that great powers will be directly involved in them. Therefore, there is a likelihood of the appearance of a threat to our security as well.

A characteristic feature is that third world countries standing on the threshold of producing their own nuclear weapons have been fundamental enemies of the Nuclear Non-Proliferation Treaty for the 20 years of its existence.

Lasting tension, especially in the Persian Gulf zone, extremist aspirations in the foreign policy of some leaders, and potential opportunities for possessing weapons of mass destruction in the near term can lead to the employment of nuclear or chemical weapons in this strategically important area of the world. More than 150 states can be plunged into this conflict. There can be numerous reasons and grounds for it, and the consequences can ignite entire regions and demolish the foundations of universal peace.

An expansion in the sphere of missile, chemical and, potentially, nuclear weapon presence in third world regions is a destabilizing factor in international relations and reduces the significance of our efforts to relax and normalize the world military-political situation, including the Soviet-American Treaty on the Elimination of Intermediate and Shorter Range Missiles as well as new agreements with the United States and NATO that are possible in the near future in the sphere of disarmament.

Thus, a gamble on force in international politics exists along with positive trends in the development of the international situation, cessation of the "cold war," and reduction of the military factor's role in the dialogue between East and West. The displacement of the center of international tension from Europe to the Near East area, a widening of the "club" of nuclear powers, and the presence of aggressive totalitarian regimes that do not stop at using armed force to achieve their arrogant claims are creating an atmosphere of instability and do not preclude possible periods of aggravations and military conflicts threatening to grip vast regions and plunge many peoples into the conflagration of war.

Considering the aspects of military danger for the Soviet Union in a somewhat different, nontraditional key, one can conclude that despite positive improvements, the Soviet Union's international position remains rather complicated. Although the threat of war has been removed, it has not been precluded and no guarantees of the irreversibility of positive changes in the world have formed. Military danger has been preserved because of the development of international processes. The unresolved nature of many political, social and regional problems and conflicts in zones of heightened tension predetermines the extreme instability of the situation and the danger that large-scale conflicts and local wars will be unleashed. Under these conditions our state needs sufficiently powerful, mobile Armed Forces

common to the entire Union that are multiethnic, regular, and manned on a mixed volunteer-compulsory basis, that meet the demands of reasonable and reliable sufficiency for defense, and that are capable of repelling aggression from any direction under the most unfavorable conditions.

Radical changes in the world military-political situation, the Soviet Union's adoption of a defensive doctrine, and the reductions that have begun in the Armed Forces all indicate the need for carrying out a military reform and bringing the Armed Forces into conformity with the degree of military threat.

This need also is dictated by a number of internal reasons of a political, economic and social nature.

Changes in political structures demand precise legal regulation of the procedure used in developing military policy and determining the organizations and officials responsible for making decisions for the country's comprehensive preparation to repel aggression, for determining defense appropriations and the fundamental directions of Armed Forces organizational development, and for making decisions for their employment.

The drop in prestige of Armed Forces service in connection with insufficient material support, poor social and everyday support, and lack of legal protection of servicemen and their families demand a cardinal solution to many social problems in the Army and Navy.

II. Content of Military Reform

The principal content of military reform is the creation of a mechanism for ensuring the security of the country and effective military organizational development. It is the bringing of the USSR Armed Forces into conformity with the level of real military danger and new political, economic and social conditions.

1. In the Military Policy Sphere

Military policy is a basic part of the overall security system of the country and is the prerogative of the state in the person of the Congress of People's Deputies of the USSR, the Supreme Soviet and the USSR President.

Military policy is fulfilled in practice by dividing levels of leadership and control into political, administrative and strictly military through establishment of a system of coordination among them, with each one's zone of responsibility defined.

The USSR President heads the system of coordination of the above structures and levels of command and control.

The Congress of People's Deputies of the USSR is the supreme organization of state authority in the sphere of military policy.

The Congress of People's Deputies of the USSR considers and makes decisions on any questions concerning

defense and determines basic directions of the country's domestic and foreign policy in the defense sphere.

The USSR Supreme Soviet exercises legislative regulation in the sphere of defense and military organizational development and makes decisions on introducing martial law, declaring a state of war and employing the USSR Armed Forces;

determines the overall structure and size of the USSR Armed Forces based on requirements of defense sufficiency;

approves: the military doctrine of the USSR, the basic directions of military organizational development, budget appropriations for defense, and amounts of material-technical resources for defense and monitors the correctness of their use;

determines the basic directions of USSR cooperation with other states in the military sphere and amounts of material and financial means allocated to other states within the scope of military assistance, and it ratifies and denounces the USSR's international treaties on such cooperation.

The President of the USSR, relying on the Presidential Council and the Defense Council under the USSR President, organizes and exercises overall direction of the defense of the USSR and is the Supreme Commander-in-Chief of the Armed Forces. He makes decisions and issues orders to the USSR Armed Forces on the conduct of military operations as well as on the use of nuclear weapons in accordance with military doctrine, declares general or partial mobilization, declares a state of war and brings up this question for consideration by the USSR Supreme Soviet. The USSR President bears personal responsibility for the organization, status and maintenance of national defense at a level ensuring the USSR's guaranteed protection against encroachments from without and for overall leadership and state of the USSR Armed Forces.

The USSR Ministry of Defense exercises leadership over the USSR Armed Forces; maintains their constant combat and mobilization readiness and combat effectiveness; draws up and submits for approval to the USSR President draft plans for employing the USSR Armed Forces and integrated plans for developing arms and military equipment; conducts a unified military-technical policy in the state, is the general procurement agency for creating, upgrading and repairing arms and military equipment, and exercises supervision over their development, testing, production and quality; exercises supervision over fulfillment of USSR legislation on questions of preparing citizens for military service, takes part in calling up citizens for active military service, and plans and organizes the training of militarily trained reserves.

The USSR Ministry of Defense is responsible to the supreme organizations of state power and administration for the status, development, constant combat and

mobilization readiness, combat effectiveness, training and timely deployment of the USSR Armed Forces, and for reliable protection of the Soviet people's peaceful labor and of the USSR's sovereignty and territorial integrity.

2. In the USSR Armed Forces

The reform of the USSR Armed Forces is the nucleus of the entire military reform. It envisages the reorganization and qualitative renewal of all Armed Forces components while at the same time reducing them and giving them a strictly defensive direction.

The reform is called upon to ensure a scientifically substantiated level of defense potential in accordance with the principle of reasonable sufficiency; optimization of the regulation organizational structure of the troops and military command and control agencies; development of long-range military-technical policy and outfitting of the Army and Navy with modern weapons and military equipment with high qualitative parameters; the restructuring of cadres policy and the democratization of official military relations; a change in the USSR Armed Forces manpower acquisition system and of military cadres training; a reorganization of the system of political organizations in the Army and Navy; the creation of an effective system of servicemen's social protection and strengthening of legislative foundations for USSR citizens' performance of active military duty.

The year 1987, when a new military doctrine of a strictly defensive direction was adopted, should be considered the beginning of military reform. The conclusion and fulfillment of the INF Treaty as well as withdrawal of Soviet forces from Afghanistan became the embodiment of the doctrinal aims. The unilateral reduction of the Armed Forces begun in 1989 and the elimination of medium range missiles presently are concluding. A fundamentally new USSR Armed Forces defensive grouping is being consistently established within the Soviet Union's borders, and plans for employing the USSR Armed Forces are being revised. It is planned to completely finish withdrawing Soviet forces from the territory of Hungary and of Czechoslovakia in mid-1991, and from Mongolia in 1992. The Western Group of Forces has begun to withdraw from a united Germany. Serious transformations have begun in the military economic system. Conversion already has taken in over 400 enterprises of the defense complex and 100 civilian plants which were filling military orders. The military budget is being reduced. The Railroad Troops, MVD Internal Security Forces and USSR KGB Border Guard Troops were removed from the Armed Forces in 1989.

The reform presumes the resolution of pressing problems and a further upgrading of the USSR Armed Forces simultaneously in all directions: a reduction of the military-technical lag behind armies of NATO countries,

above all in such kinds of arms as long-range precision-guided missiles with conventional warheads and automated command and control and weapon control systems; and the concentration of efforts on developing new spheres of military equipment and advanced technologies.

The existing USSR Armed Forces branch structure is to be retained until 1996. Subsequently, their branches and combat arms are to be upgraded, as troops and armaments are reduced, consolidating those most related in missions of combat employment and in armament. Structures that are not a specialization of the USSR Armed Forces—the Civil Defense Troops and road construction formations and units—will be removed from the makeup of the Armed Forces; military construction detachments of other ministries and departments will be disbanded. This process is to be accompanied by the reduction and elimination of a number of large strategic formations, formations, military educational institutions, scientific research establishments, and redundant and parallel command and control entities, and by the optimization of tables of organization (a transition from the structure of combined-arms and tank armies to armies with a unified structure; combined-arms divisions are to be shifted to tables of organization with a greater defensive direction and from 20 to 40 percent of the tanks are to be removed from their makeup; the number of aircraft in Air Force regiments is to be reduced from 40 to 32).

The volunteer recruitment of warrant officers, extended-term servicemen, and servicewomen for military service is to be expanded.

A shift is to be made to a mixed principle of USSR Armed Forces manpower acquisition, combining universal military obligation with volunteer entry into military service (by contract) to private and NCO positions.

Non-military [vnevoyskovaya] (alternative) service is to be introduced.

A dual task in the force training system is to be accomplished—new principles and methods of conducting military operations stemming from principles of defensive doctrine are to be mastered, and a stable military cadres training system is to be established under conditions of reduced intensity of combat training.

The reform of the USSR Armed Forces is to continue and be completed in three phases.

In the first phase (up to 1994) measures for reducing nuclear and conventional arms are to be fulfilled, the withdrawal of forces from Czechoslovakia and Hungary in 1991 and from Mongolia in 1992 is to be completed, and basically a withdrawal of forces from Germany is to be carried out. Strategic force groupings are to be formed on USSR territory for repelling aggression. USSR Civil Defense and road construction formations and units are to be removed from the makeup of the USSR Armed Forces.

All operations and mobilization plans are to be revised and new legislative measures governing military organizational development are to be prepared. The redeployment and establishment of troops and the stationing of arms and military equipment on Soviet Union territory is to be completed. The transition to a new system for preparing mobilization resources and training scarce specialists based on district training centers and military schools is to be begun. Work of operational preparation of the territory of border military districts and fleet basing facilities is to unfold. The implementation of a Special Program for Social Security of Servicemen and Their Families as well as of Persons Discharged from Active Military Service is to begin.

In the second phase (1994-1995) the reduction of the USSR Armed Forces is to be basically completed, the conditions for the final formation of their makeup and structure are to be prepared, and the forces are to be completely withdrawn from Germany. The process of forming a strategic Armed Forces grouping on USSR territory is to be completed and work on the operational preparation of the territory of border military districts is to continue. The central apparatus is to be reorganized and the internal structure of military districts and the system of military educational institutions is to be updated. The transition to a new system for preparing mobilization resources and the training of scarce specialists based on district training centers and military schools are to be completed.

In the third phase (1996-2000) the 50-percent reduction in strategic nuclear forces is to be completely finished. The set of measures for upgrading the qualitative parameters of the USSR Armed Forces (effectiveness, mobility and economy) is to be continued and the up-grading of the armaments of Army and Navy forces in accordance with armament programs up to the year 2000 is to be completed. Depending on the development of the military-political situation, the branches of the USSR Armed Forces and the types of troops as well as command and control organizations are to be reorganized. The complete fulfillment of the Special Program for Social Security of Servicemen and Their Families is to be ensured.

Optimizing and upgrading the authorized organizational structure will allow the creation of USSR Armed Forces that are economically less burdensome for the state and at the same time more effective and capable of ensuring the country's reliable defense under any conditions.

The strategic nuclear forces are to be developed to deter an enemy from initiating a nuclear war and, in case it begins, to guarantee their execution of combat missions in retaliatory operations.

The Strategic Missile Forces are to retain the existing structure up to the year 2000. On achieving an agreement with the United States for a radical reduction of strategic offensive arms, the number and size of large strategic formations, formations and units of strategic nuclear forces are to be reduced by more than 30 percent.

Priority is to be given to increasing missile weaponry's resistance to damage-producing factors of nuclear and conventional weapons and to increasing the command and control system's survivability under conditions of retaliatory operations.

The Ground Forces will continue to be the basis of force groupings in continental TVD's [theaters of military operations]. It is planned to reduce their size by 10-12 percent while preserving a capability for rapid deployment in the event of a growth of the military threat to the USSR.

As the basis of Ground Forces' development, it is planned to further up-grade arms with new, advanced models of weapons and military equipment and the introduction of automated command and control and weapon control systems. The number of armies, corps and divisions is to be reduced. Subunits, units, formations and large strategic formations are to be reorganized, concentrating the main efforts on improving their defensive power.

Force groupings are to be kept in a state of combat readiness permitting the repulsing of aggression by the peacetime force composition, with their subsequent buildup for defensive operations.

The Air Defense Forces will remain constant-readiness forces despite an 18-20 percent reduction in size. The Air Defense Forces are to be developed through a qualitative upgrading under conditions of a reduction in numbers of personnel and a sizable reduction in appropriations and deliveries of arms and military equipment.

Air Defense personnel and equipment are to be developed by outfitting the SAM Troops, Fighter Aviation, and Radiotechnical Troops with new weapons of warfare and by developing the intelligence-gathering and command and control system.

The organizational structure is to be upgraded by reducing the number of large strategic formations and formations. The effectiveness, stability and survivability of force groupings is to be ensured, while having reduced the overall cost of the air defense system.

In the Air Force the [personnel] composition and the structure is to be brought up to the level necessary to defense sufficiency. The number of different types of aviation equipment and the time periods for up-grading the armaments of air formations and units are to be reduced. The size of the Air Force is to be reduced by 6-8 percent by upgrading the authorized organizational structure. The quality of flight training is to be improved. The aircraft basing system, above all in the European USSR, is to be improved.

In the Navy the force composition of personnel and equipment is to be maintained at the level of defense sufficiency comparable with the real threat to USSR interests. The combat capabilities of the fleets are to be increased under conditions of a further reduction in ship

strength through their qualitative renewal, and command and control systems and equipment and all kinds of support are to be upgraded. The Navy's organizational structure is to be continued to be upgraded.

The Rear Services of the USSR Armed Forces are to be preserved basically at the previous peacetime strength, which is less than 2.6 percent of the strength of the USSR Armed Forces (it is 48 percent in the U.S. Army).

The principal problem of the USSR Armed Forces Rear Services is the planned stockpiling of supplies under conditions of the state's transition to a market economy and a possible further aggravation of the country's economic situation in the transition period.

It is proposed to reduce the size of command and control agencies, large strategic formations, formations, units and establishments not included in branches of the Armed Forces and not connected with performance of combat missions by 30 percent and to reduce the overall number of military educational institutions and scientific research establishments. The number of USSR deputy ministers of defense is to be reduced.

The military-administrative division of USSR territory is to be updated, bringing it in line with the new conditions.

These transformations will permit a reduction of the size of the USSR Armed Forces to 3.0-3.2 million, eliminating redundant and parallel entities, bringing the authorized organization structure into line with the level of military danger and defense sufficiency, and reducing the size of directorates at central, district and army levels by 15-20 percent.

The Training of Military Cadres

An improvement in the military cadres training and manpower acquisition system of the USSR Armed Forces is the central direction of military reform. Its basis is an increase in the role of the human factor and in the professionalism of military cadres and all Army and Navy personnel.

Given the removal of USSR Civil Defense and of road construction units from the composition of the USSR Armed Forces, the authorized number of general and flag officer positions is to be reduced by 1,300, officer positions by 220,000 and warrant officer positions by 250,000.

During the reform the possibility of a reduction of officer positions (15,000-20,000) in establishments and support and services organizations by replacing some regular officers with Soviet Army and Navy employees with an appropriate level of skills and training, as well as around a 50-percent reduction of officers attached to civilian ministries and departments for performing work of a defense nature is to be examined.

In connection with the reduction in the USSR Armed Forces it will be necessary to clarify the future requirement for officers over the next ten years for all military occupational specialties, training levels and training specialization areas and to reduce the capacity and overall number of military educational institutions. The training facilities of military educational institutions are to be reorganized and consolidated through a consolidation of the institutions. The role and the leading position of military academies as training-methods and scientific centers of the branches of the USSR Armed Forces and combat arms are to be elevated and solidified and a decrease in their scientific-pedagogic potential and elimination of scientific schools is to be prevented.

The training of officers with a higher specialized military education in the most difficult and science-intensive specialties in engineering faculties of academies, with a six-year term of study is to be expanded. The possibility of training civilian specialists in military academies for defense sectors of industry on a contractual basis is to be provided for.

In the concluding phase of training the differentiated specialization of students and cadets given their specific future position assignment in the troops and in the fleets is to be ensured.

The possibility of organizing organic as well as non-organic (on an economic contract basis) preparatory courses in military educational institutions is to be provided for for candidates, and organic preparatory courses for young men of indigenous nationalities of republics with a ten-month term of study. The network of specialized boarding schools with intensified military and physical culture training is to be expanded.

The reform of the military education system is to be directed toward giving it greater flexibility and the capability of reacting promptly to current and future troop requirements under conditions of the high dynamism of development of military science and technology and major socioeconomic transformations in the country. During the reform, in the period 1991-1995 higher military schools are gradually to be shifted to training officers with a command-engineering area of specialization having a five-year term of study. Subsequently the possibility of transferring all military educational institutions to a five-year term of study regardless of the training area of specialization is to be examined.

During the change in the troops' authorized organizational structure, the number of officers is to be reduced without infringing on vital interests. Only officers having the right to pension support are to be discharged. Officer cadres are to be transferred, taking into account the presence of living space and the prospects for its increase in garrisons.

The number of general and flag officer positions are to be reduced by at least 30 percent in connection with a reorganization of command and control entities, including those of the USSR Ministry of Defense central

apparatus. The number of positions with the authorized category of "colonel" as well as the number of officer positions are to be considerably reduced by replacing some regular officers with Soviet Army and Navy employees in establishments and in support and services organizations.

The future requirement for warrant officers is to be determined in accordance with the reorganization of the Armed Forces structure and the reduction in their size. This category of servicemen is to be used to fill only basic command-technical positions in the Army and Navy.

Beginning in 1996 a new list of positions to be filled by warrant officers is to be developed and introduced, having provided for a reduction in their overall number by more than 40 percent and a reduction in nomenclatura by 35 percent.

A contractual basis for organizing warrant officer service is to be begun in 1993 and shifted to by 1996, with its foundation being legal rules ensuring legal incorporation of mutual obligations of servicemen and the command authority.

The warrant officer training system is to be reorganized, aiming it at an increased quality of specialist training. The training period is to be increased to 1.5-2 years depending on the training area of specialization and, beginning in 1991, a system of competitive entrance exams in warrant officer schools is to be introduced.

The System of Manpower Acquisition

The USSR Armed Forces manpower acquisition system is to be structured in accordance with the provisions of the USSR Constitution on defense matters and the USSR Law "On Universal Military Obligation" that is in force, taking into account the experience of wars and the trends of world practice in military organizational development.

The existing methods of manpower acquisition for the Army and Navy, combining citizens' voluntary entry into military service (officers, warrant officers, extended-term servicemen, and servicewomen, who make up the professional base of the Army and Navy) and the call-up of youth for first-term active military service in accordance with the law (sergeants, petty officers, privates, seamen and military construction personnel), is to be considered in accordance with the political, economic, social and purely military considerations most acceptable to the USSR Armed Forces and those methods are to be retained for the immediate upcoming years.

At the same time, the growth in professionalism of Army and Navy personnel in subsequent years also must be ensured through an expansion of the acceptance of civilians in NCO and private positions on a voluntary basis.

The question of reducing terms of service to 18 months beginning in 1994 is to be examined, taking into account

the changes in the country's demographic situation and in troop requirements for replacements.

Alternative service is to be introduced with the adoption of the USSR Law "On Universal Military Obligation and Military Service." Non-military (alternative) service is envisaged for USSR male citizens who cannot perform or refuse to perform active military service in the ranks of the USSR Armed Forces for religious or other convictions of conscience.

Alternative service is exclusively voluntary and should have no restrictions, including on the number of USSR citizens who choose it.

The length of such service should be somewhat greater than that of active military service. It is proposed to establish its term at three years, and at one-and-a-half years for citizens with a higher education.

In addition to personal statements of USSR citizens, the basis for assigning them to alternative service also must be a written petition of religious, pacifist and similar organizations officially registered under established procedures and in which they have been members for at least the specified period of time.

Alternative service must be performed primarily at national economic sites in any region of the country and must be governed by special union-level legislative measures.

Leadership and the decision of all matters connected with organization of alternative service and USSR citizens' performance of it is the prerogative of a special organization under the USSR Government.

It is advisable to leave with the USSR Minister of Defense the functions of final legal (formal) registration of persons for performance of alternative service and their transfer to appropriate civilian management entities for fulfillment of the constitutional obligation.

By 1994 the total disbandment of all military construction detachments transferred to ministries and departments for performing national economic tasks is to be completed and the conditions of USSR Armed Forces manpower acquisition are to be improved.

The extraterritorial principle is to be preserved and legislatively incorporated, fully ensuring peacetime training and the buildup of necessary militarily trained reserves in areas of troop deployment under a mobilization plan, as the fundamental principle of USSR Armed Forces manpower acquisition.

Greater glasnost and openness in organizing the call-up of civilians for active military service is to be introduced. An opportunity is to be provided for representatives of labor collectives, enterprises, educational institutions and public organizations to participate on draft boards. The draft is to be conducted in strict conformity with the USSR Law "On Universal Military Obligation and Military Service."

The practice of training specialists in formations and units, which did not justify itself, requires a transition to a new system for training militarily trained reserves based on district training centers, military schools and other educational institutions of branches and combat arms.

The opinion existing in certain circles about the alleged economic advantageousness of maintaining a professional army is groundless, based only on emotions, and pursues selfish objectives of freeing some of the population from performing the sacred duty and honorable obligation of defending their Motherland.

The argument that a regular professional army in peacetime is most combat-effective and best trained generates no objection but, as shown by the experience of wars, a

state without militarily trained resources will be incapable of supporting the transition of the Armed Forces from a peacetime to a wartime footing and the qualitative replacement of personnel losses in short time periods.

The upkeep of a professional army and expenditures for preparing necessary mobilization resources will be a heavy burden on the country economically. The fact that its upkeep will be more costly can be judged from the U.S. Army, based on the fact that over 50 percent of the general defense budget goes for these purposes in the United States, while for us it is less than 30 percent.

Results of USSR Ministry of Defense calculations of expenses for upkeep of a professional army taking into account one-time expenditures for its establishment and for the creation of corresponding physical facilities are shown in the table.

Calculation of Expenditures for Pay and Allowances of USSR Armed Forces Personnel, Housing Construction and Pension Support with Different Methods of Manpower Acquisition (Billions of Rubles)

USSR Armed Forces Size	Under Existing Law					On a Volunteer Basis					Increase in Annual Expenditures with Volunteer Manpower Acquisition	By How Many Times
	Annual Expenditures for Personnel Pay and Allowances, Housing Construction and Pensions	Pay and Allowances	Social-Everyday Support	Housing Construction	Pension Support	Annual Expenditures for Personnel Pay and Allowances, Housing Construction and Pensions	Pay and Allowances	Social-Everyday Support	Housing Construction	Pension Support		
						Average monthly pay: privates R430, NCO's R645, warrant officers R820, officers and generals R950						
3993.0	15055.0	5766.0	4804.0	2045.0	2440.0	56485.5	31 020.6	8909.9	3375.0	13180.0	41377.8	3.75
2500.0	10640.0	3610.0	3010.0	1280.0	2740.0	35273.0	19 391.0	5522.0	2110.0	8250.0	24633.0	3.3
						Average monthly pay: privates R500, NCO's R750, warrant officers R950, generals and officers R1100						
3993.0	15055.0	5766.0	4804.0	2045.0	2440.0	63622.0	36 010.0	8907.0	3375.0	15330.0	28567.0	4.2
2500.0	10640.0	3610.0	3010.0	1280.0	2740.0	39772.0	22 550.0	5522.0	2110.0	9590.0	29132.0	3.65

Substantiation of calculations for USSR Armed Forces upkeep was conducted taking the following into account:

1. The strength of the USSR Armed Forces was taken as of 1 January 1990 at 3,993,000, and one of the predicted variants as a result of deep reductions in troops and arms is 2,500,000.

The 1990 USSR defense budget amounting to R70,993,000,000 is the basis of these calculations. The basic budget expenditure items connected with the procurement of arms and military equipment, NIOKR [scientific research and experimental design work], military construction and others, amounting to R55,920,000,000 are proposed to be considered constant both for a professional and for the existing army.

The main variable characterizing dynamics of the growth of expenditures with a change in the USSR Armed Forces manpower acquisition method consists of expenditures for pay and allowances and for housing and pension support of personnel, comprising R15,055,000,000 for 1990.

2. Pay for privates in the first year of service in the Ground Forces is taken at R350 and R400 per month. It will average R430 and R500 respectively considering the years served, area factors, and class rating (the existing average monthly pay of workers and employees in the USSR is R254). Pay and allowances of NCO's, warrant officers, officers and generals are to be increased in proportions corresponding to those existing in industry (1.5, 1.9, and 2.2 times).

Pay and allowances of seamen or privates; warrant officers; and officers and admirals or generals of the Navy and Air Force are to be increased by 15, 12 and 13 percent respectively compared with the Ground Forces, taking into account features of duty performance.

3. Social-everyday support includes expenditures for food, medical and sanatorium-health resort services; administrative, postal-telegraph and billeting-maintenance support; rail movements; clothing support and so on and is to be around 30 percent of annual expenditures for personnel upkeep.

4. One-time expenditures for social-everyday facilities include expenditures connected with renovating and constructing new barracks and messhalls and expanding the network of polyclinics, sanatorium-health resort establishments, hotel-type dormitories for families of privates, quarters for NCO's, officers and generals, schools, kindergartens, and nurseries and are not included in the overall sum of annual expenditures. They make up a sum within the limits from R6.2 to R10.0 billion.

5. Expenditures for combat training of the professional army, logistic support, and development of a simulator facility will increase by 3-5 times.

6. Expenditures connected with construction of quarters and social-everyday facilities and with the development of the food base will increase given voluntary USSR Armed Forces manpower acquisition. The amount of these expenditures is proportionate to the number of USSR Armed Forces warrant officers, officers and generals. An increase within the limits of 65 percent has been taken into account in the calculations.

7. Expenses for servicemen's pension support have been increased an average of 66 percent because of the discharge of officers and generals with a reduction in size of the Army and Navy.

Calculations of expenditures for upkeep of a professional army conducted in the USSR Ministry of Defense show that even given a reduction in size of the USSR Armed

Forces to 2.5 million, their annual upkeep will cost the country 3-4 times more compared with 1990.

The USSR Ministry of Defense believes that professionalization of the Army must grow gradually. It would be desirable to have professional servicemen in junior command personnel positions and in positions which determine the combat effectiveness of subunits and units.

In connection with the transition of seamen and petty officers to a two-year term of military service in the Navy in 1991, the USSR Ministry of Defense has gone to the USSR Government with a proposal to conduct an experiment in a number of formations to recruit servicemen for military service "under contract."

If the experiment justifies itself, then there will be an opportunity to accumulate and generalize the experience of mixed manpower acquisition of the USSR Armed Forces by 1994 and approve it on a wider plane in the third phase of military reform.

The method of USSR Armed Forces manpower acquisition of first-term servicemen based on universal military obligation in combination with voluntary entry of NCO's and privates on military service is the most acceptable at the present time and for the near term.

Improvement of Military-Technical Policy

The principal direction of military-technical policy is a qualitative upgrading of arms and military equipment based on the latest scientific-technical achievements and foremost technologies, the timely creation of a scientific-technical reserve, and the use of the results of basic and exploratory research in creating new weapons of warfare.

An improvement in military-technical policy has the objective of substantially raising the quality of arms and military equipment being delivered to the troops, reducing their mix, reorganizing the system of orders and creating an effective economic mechanism permitting exclusion of extensive paths of development and ensuring conformity of the USSR Armed Forces' technical outfitting to the real degree of military danger and defense sufficiency.

Because of this the Armed Forces will gain an opportunity to maintain strategic parity with a steady reduction in its level using less personnel and equipment, while at the same time having reduced appropriations for production and procurement of arms and military equipment.

The principal criterion in developing new arms is "cost-effectiveness," which, with an absolute increase in cost of a single weapon model, permits a reduction of the number of units of this type of weapon for guaranteed performance of combat missions through increased effectiveness of its combat capabilities, thereby reducing overall expenditures for procurements.

An increase in qualitative parameters of arms and military equipment is of especially great importance under new economic conditions.

The conversion of military production and a reduction in the proportion of production capacities of plants, scientific research institutes and design bureaus fulfilling military orders; a reduction in the overall volume of deliveries of arms and military equipment; a substantial increase in cost of NIOKR and of series models of arms; and decentralized control of the economy and disruption of production relations formed earlier in industry all place new demands on Ministry of Defense military-technical policy.

To increase the results of NIOKR in creating new and very important models of arms under these conditions, it is proposed that directorates placing orders organize the development of technical proposals for these models on a competitive basis. The decision on the procedure for conducting such NIOKR is to be made based on results of a tactical-technical-economic appraisal of competitive developments. This will allow the Ministry of Defense to accept the most promising models of weapons and military equipment into the inventory and will create competition among developers and the desire to reduce production cost. This gains special urgency under conditions of a transfer of the right to distribute appropriations for financing NIOKR for developing arms and military equipment to the USSR Ministry of Defense. Arms orders will be filled only under USSR Ministry of Defense contracts with weapon developers.

In addition, it is proposed to significantly expand functions of USSR Ministry of Defense military representatives at enterprises of defense sectors of industry, increase their responsibility for the quality of arms and equipment being produced, and also to remove military representatives from financial dependence on the heads of industry enterprises; and to organize the work of recycling arms and military equipment within the framework of a unionwide interdepartmental program, with this work financed from state budgetary funds. It is necessary to have a permanently operating system in the USSR Ministry of Defense for realization (sale) of arms and physical assets being freed up as a result of the reduction of the USSR Armed Forces.

The fulfillment of the military-technical policy is an inalienable part of the new defensive military doctrine and is called upon to ensure the defense capability of the country under conditions of a reduction of Armed Forces and arms.

Improvement of Political Work, the System of Education, and Special Propaganda

A restructuring of political and party work is to be carried out based on the provisions of the USSR Law "On Public Associations," the USSR Presidential Decree dated 3 September 1990, and the 28th CPSU Congress Resolution "On the Basic Directions of Party Military Policy at the Present Stage."

The following are to be specified as basic directions, ensuring a profound restructuring of party-political work during the military reform:

1. Improving the system of education of Army and Navy personnel, activities of sociological and psychological services, the organization of the legal universal educational program and social-legal protection and cultural-enlightenment work among servicemen, Soviet Army workers and employees and their families in the interests of forming and maintaining the high moral-political and psychological state of Army and Navy forces, ensuring unconditional performance of missions by the USSR Armed Forces in peace and wartime, and the maintenance of high readiness of military-political entities for action in a combat situation.

2. Accomplishing fundamental changes in authorized organizational structures of party-political institutions and their functions along the following directions:

—reform of political organizations as military-political organizations for conducting state policy in the USSR Armed Forces;

—the formation of elective party organizations for the entire USSR Armed Forces structure in accordance with the USSR Law "On Public Associations," the CPSU Rules and the Statute "On the CPSU Central Control Commission," and a restructuring of their functioning;

—the conduct of corresponding structural and functional changes in the organizations of Komsomol and trade union organizations of the Army and Navy on an elective basis;

—the establishment of substantial qualitative change in the system of training and retraining political, party, Komsomol and trade union cadres;

—studying and introduction of suggestions and a mechanism for financing newly created elective organizations;

—the resolution of questions connected with the development of a mechanism for coordinating elective organizations with military councils, commanders, military-political organizations, public organizations and the mass media, as well as proposals on organizations of military printed publications and of party and military-political organizations.

3. Building up processes of democratization and glasnost in party and political work. Restructuring the information-reference service.

4. Intensifying political work among servicemen and the population of foreign countries. Qualitatively reorganizing the special propaganda apparatus in terms of the changes occurring abroad and within the country. Improving the system of military-political study of foreign countries and armies. Establishing a department for studying problems of ideological and psychological conflict under new conditions and for developing effective techniques and methods of conducting it in the Social and Psychological Problems Research Center. Restructuring the system for training special propaganda cadres

and foreign servicemen studying in USSR Ministry of Defense military educational institutions.

Subsequently carrying out the next steps aimed at elevating the qualitative level and effectiveness of political work given political decisions, possible changes in military organizational development, the approach to military service and the acquisition of experience.

Military Cooperation of the USSR with Foreign Countries

USSR military cooperation with foreign countries is to be directed toward strengthening USSR security and preserving our positions in friendly countries taking into account the USSR's principal tasks in the international arena and our country's economic and military interests. In the period in question the conduct of a long-term line toward limiting military assistance to foreign countries is envisaged, above all in zones of international tension and on a reciprocal basis with the West where possible.

To increase the economic effectiveness of cooperation, a consistent reduction in the volume of military assistance on an uncompensated, preferential basis is to be provided for. A reorientation of military cooperation toward qualitative criteria is to be ensured and its effectiveness is to be increased in all directions. In delivering special equipment primary emphasis is to be placed on selling modern, competitive models of Soviet weapons in demand in the world market.

In giving countries military assistance, their priority is to be determined based on the content of the foreign policy they follow and its conformity to the principles of the new political thinking. Socialist countries remain our basic partners in military cooperation.

During 1991-1995 the development and adoption of the necessary legislative measures for military cooperation is to be ensured and great glasnost and openness in this area is to be introduced.

Financial Support for the Development of the USSR Armed Forces and the Social Protection of Servicemen

In connection with the deepening of economic reform and the transition of the country's economy to a regulated market economy, new approaches to financial support of measures for developing the USSR Armed Forces are to be developed and applied. Taking into account the rigid regulation of defense expenditures, the application of market prices to military products is to be considered unacceptable. Enterprises supplying products for defense needs are to be given incentives by granting tax benefits and advantages. Such an approach will permit not only the balancing of plans for arms and military equipment deliveries, but also the implementation of a course set toward reducing military expenditures.

According to preliminary calculations, the volume of appropriations for national defense up to the year 2000 will be as follows:

Description of Expenditures	In Billions of Rubles (In 1991 Prices)	
	1991-1995	1996-2000
1. Procurements of arms and military equipment	290.7	295.0
2. NIOKR	88.6	97.8
3. Upkeep of Army and Navy	172.1	174.8
4. Capital construction	28.1	26.8
5. Servicemen's pensions	21.4	24.0
6. Other expenditures	11.3	8.6
Total	612.3	617.0 [sic]

In addition, establishing the troops being withdrawn from countries of Eastern Europe and Mongolia at new stationing locations will require capital investments of more than six billion rubles, not counting other expenditures.

At least five billion rubles are needed for building enterprises to destroy chemical weapon stockpiles and for building facilities for the disposal of nuclear submarine reactor compartments.

Recycling other kinds of arms and military equipment will require another R2.5 billion.

Under conditions of reduced defense expenditures, economic work at all USSR Armed Forces command and control levels is to be stepped up and a further expansion of the rights and increased responsibility of commanders and chiefs for the use of the state funds placed at their disposal is to be ensured.

The principles of a socialist rule-of-law state and the rules of international law are to be made the basis of servicemen's social guarantees and of further democratization of society's entire military organization. In 1991 the drawing up drafts of the USSR Law on Defense, the Law on the Status of Servicemen, the Law on Universal Military Obligation and Military Service, the Statute on the Performance of Military Service, and the Combined-Arms Regulations are to be finished, providing measures in them for creating a reliable mechanism for servicemen's legal protection.

The possibility of granting cadre officers the right to be discharged from active military service to the reserve at their own desire, if they have served in officer positions for at least ten years, is to be provided for. A certain reduction of this right subsequently as stable Armed Forces manpower acquisition of officer cadres is achieved is to be provided for.

The rights of all categories of servicemen in socio-economic and personal spheres and define the duties of all state organizations, public organizations and officials for protecting and respecting their person, dignity and honor

are to be incorporated in legislation. Officers are to be guaranteed the performance of military service in time periods established by law for obtaining pension benefits.

With the adoption of the USSR Law "On General Principles for Preventing Legal Infractions in the USSR," a Statute on the Prevention of Legal Infractions in the Army and Navy is to be drawn up.

Responsibility for inflicting moral or other damage on servicemen and for insulting the USSR Armed Forces and their symbols is to be strengthened. A system of servicemen's social life and health insurance is to be provided.

All standards of servicemen's social security are to be systematized and the procedure for implementing them are to be incorporated into legislation.

In accordance with the Special Program for Social Security of Servicemen and Their Families as Well as of Persons Discharged from Active Military Service, a substantial increase (by R100-150) in base pay and allowances for officers, warrant officers and extended-term servicemen is to be provided beginning in 1991. The amount of the increment in place of food rations is to be brought up to the real cost of food rations (R50 per month) and base pay and allowances of up to R20-25 per month for first-term personnel are to be established, depending on the position held. Compensatory payments to servicemen and their families in case of wounding, concussion, mutilation or death of a servicemen during performance of peacetime military service are to be introduced. The rations of first-term servicemen are to be improved. A proposal to the USSR Council of Ministers on establishing benefits for first-term servicemen is to be introduced, provided for persons serving in remote and equivalent localities as well as for granting annual leaves to first-term privates and NCO's.

An income indexing mechanism that protects servicemen having a low fixed pay is to be developed.

Major measures for resolving the housing problem in the Army and Navy are planned:

the construction of residences with an overall area of 25 million m² (including 1.5 million m² for servicemen of formations and units removed from the CSFR and Hungarian Republic to USSR territory during 1990-1991) during 1991-1995 for servicemen on active military service and their families as well as workers and employees of the USSR Ministry of Defense living outside of cities and city-type settlements, of which 19 million m² is to be built by forces of the USSR Ministry of Defense military construction organizations and 5 million m² by forces of union republics as the USSR Ministry of Defense proportional participation in housing construction.

In the period 1996-2000 residences for servicemen with a total area of 25 million m² are to be placed in service.

The following under plans of councils of ministers of union republics are to be pursued:

the construction during 1991-1995, as proportional participation, of residences with a total area of 4.2 million m² for supporting persons who are subject to resettlement from closed and isolated military compounds, using funds additionally allocated to the USSR Ministry of Defense for these purposes;

the construction during 1991-1995 of 5 million m² of housing and an additional 3.0 million m² in the next five-year period for servicemen discharged to the reserve or retired, with the involvement of USSR Ministry of Defense contracting organizations.

The development and adoption of a statewide program of social security for servicemen and their families in connection with the removal of Soviet forces from the territories of countries of Eastern Europe over the next four years are to be pursued. A draft program for additional construction of residences with an overall area of 6.8 million m² during 1991-1995 for servicemen of this category is to be sought.

Within the range of capital investment limits established for the USSR Ministry of Defense for production construction, special-purpose funds for social and cultural-everyday facilities during 1991-1995 are to be allocated in amounts ensuring creation of normal everyday conditions for officers, warrant officers and their families as well as for first-term servicemen.

An increase in capacities of own housing construction production base from 1.9 million m² in 1990 to 2.9 million m² in the 14th Five-Year Plan is to be ensured.

Under conditions of the transition to a market economy and the proclamation of sovereignty by union republics, the inclusion in the Union Treaty of the responsibilities of the republic governments for their participation in providing living space to servicemen of units and formations stationed on territories of the republics, as well as to those who have arrived at a permanent place of residence after discharge from ranks of the USSR Armed Forces is to be pursued.

Realization of all these and other measures will give new quality to the legal and social protection of servicemen and their families and will form an effective mechanism precluding a decline or reduction in the moral-political state of personnel and prestige of the USSR Armed Forces, above all in the eyes of young people wishing to link their future with the Army and Navy.

III. Conditions for Conducting Military Reform

Military reform in the period in question will be accomplished in a difficult economic and sociopolitical atmosphere in the state.

The crisis state of the country's economy, a drop in planning, labor and production discipline, the profound state of disorder of state finances and, as a result, the

reduction of the budget for defense needs and simultaneous considerable increase in expenditures for the Soviet Union's fulfillment of agreements and treaties signed in the arms reduction and control sphere create extremely difficult conditions for carrying out military reform measures provided by this Concept.

Nationalist and separatist sentiments reinforce centrifugal processes and internal political instability. The line toward secession from the USSR and the establishment of national armed forces, being followed by a number of union republics, weakens the unity of the union and strengthens internal political instability.

The changes in the Soviet Union's political structures demand precise legal regulation of the procedure for developing military policy. The question of what a renewed Soviet Union will represent under the new Union treaty and the Armed Forces' role and place in society's new political organization has not been resolved.

The spiritual crisis caused by a reappraisal of our history and the strengthening of pacifist sentiments in society has led to a drop in the Armed Forces' popularity and in the prestige of military service. Questions of Armed Forces manpower acquisition have assumed special acuteness as a result of activities by authorities of a number of republics, which have adopted anti-constitutional legislative measures provoking young people to evade military service. The spring 1990 conscription plan in the Armenian, Georgian, Lithuanian and Latvian republics essentially has been disrupted. The idea of establishing an all-volunteer army, national force elements and the territorial principle of Armed Forces manpower acquisition (which undermines the Army's combat effectiveness and leads to an aggravation of the internal political situation under conditions of exacerbation of interethnic relations) is being persistently imposed on society.

In examining the internal conditions for development of military reform, it is also impossible to ignore the present state of the Army and Navy.

Tension is preserved in the Armed Forces because of an entire set of external and internal factors, among which the foremost is the Armed Forces' reduction and withdrawal of forces from countries of Eastern Europe and Mongolia under conditions of a lack of legal and social protection of servicemen and their families.

A unilateral reduction of the USSR Armed Forces by 500,000 persons, begun in 1989, the withdrawal and reduction of forces, and the storing and destruction of arms and military equipment continue simultaneously with this. The following are subject to withdrawal from the territory of Czechoslovakia, Hungary and Mongolia: over 186,000 persons, including over 43,000 officers and warrant officers, 77 operational-tactical and tactical missile launchers, 3,200 tanks, 5,150 armored combat vehicles, 2,350 field artillery pieces, 350 combat aircraft and 364 helicopters.

Withdrawal of the Western Group of Forces from the territory of Germany over a four-year period is one of the most difficult tasks facing the USSR Ministry of Defense, based on the amount of work and social consequences.

It will be necessary to redeploy the Soviet force grouping most powerful in combat and numerical strength, numbering five combined-arms armies totalling 17 divisions, one air army totalling five air divisions, and over 200 other formations and units in compressed time periods.

Included in the makeup of the force grouping being withdrawn are 370,000 servicemen (of whom some 100,000 are officers and warrant officers), 184,200 family members, including 99,300 children, over 5,000 tanks, 9,500 BTR's [APC's] and BMP's [IFV's], 4,400 field artillery pieces, 1,700 SAM systems, 620 combat aircraft and 790 helicopters. The overall amount of stores of ammunition and supplies is more than 1,660,000 tons.

In addition, the equipment of 12 fixed command and control facilities, 632 communications facilities, 31 airfields and 40 hospitals as well as a large amount of motor pool, garage and barracks equipment, vehicular and arms repair plants, and the physical facilities of ranges and training centers are subject to dismantling and withdrawal.

All formations and units being withdrawn from the groups of forces are to be stationed basically on the territory of the European USSR, primarily in housing being freed up as a result of unilateral reductions and organizational measures in the USSR Armed Forces as well as in housing being newly created at training centers and ranges.

In connection with the withdrawal of forces, an extremely difficult situation is taking shape involving the provision of housing to families of officers, warrant officers and extended-term servicemen, since the majority of them have no apartments.

Today there are 200,000 families of servicemen in the USSR Armed Forces without apartments, and three-fourths of the wives of officers and warrant officers do not have jobs. It is a difficult situation with kindergartens, nurseries, schools and dormitories. The number of persons without apartments will increase considerably with the withdrawal of the Western Group of Forces.

The material standard of living of servicemen is low. The overwhelming majority of officers and warrant officers have a small amount of pay that is the only source for maintaining a family; under conditions of the transition to a market this will undermine the prestige of military service even more and will intensify tension among officers and warrant officers.

Along with difficult problems of bringing the Armed Forces to the level of necessary defense sufficiency—

problems connected with the withdrawal and the reduction of forces—it will be no less difficult to solve problems of reequipping the Army and Navy with arms and military equipment with higher qualitative parameters under conditions of our economy's transition to market relationships. The accomplishment of this task is extremely complicated in view of the reduction of appropriations allocated to defense from the state budget.

Withdrawing forces from countries of Eastern Europe and Mongolia, establishing them on USSR territory, and recycling models of military equipment being removed from the inventory have not been supported by corresponding finances from the state budget. Appropriations for these purposes must be removed from other Ministry of Defense items of expenditure, which intensifies to an even greater extent the tension in resolving military-technical and everyday social problems of the Armed Forces.

The appropriations for NIOKR for arms and military equipment have been reduced by 15 percent in 1991 compared with 1988, and the appropriations for deliveries have been reduced by 19.5 percent. Such a reduction forced the Ministry of Defense to reject a large number of programs for weapons developments and deliveries, to concentrate allocated appropriations on the minimum permissible product mix permitting replacement only of the troops' most obsolete materiel (manufactured in the 1950's and 1960's), and to finance developments already under way, sharply limiting future research. A further reduction of appropriations for these items of expenditure will lead to undermining of Armed Forces level of technical equipment supply and of combat readiness and will deprive us of an opportunity to upgrade arms.

There will be a significant increase in the cost of arms, military equipment and NIOKR in connection with the introduction of new wholesale prices in 1991. For example, the cost of a modern tank will increase by 1.5 times, a combat aircraft by 1.6-1.7 times, and an artillery system by 1.4 times, and for certain kinds of arms prices will rise even more.

All this indicates the difficulty of the situation in which it will be necessary to carry out military reform. In this connection it is advisable to carry out further profound structural transformations of the Armed Forces (not connected with obligations already undertaken under international agreements) after stabilization of the country's economic situation and resolution of social problems in the Armed Forces.

Draft Reform Plan by Lopatin, Others

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VESTNIK in Russian No 48, Nov 90 pp 5, 10-12*

[Draft entitled: "On the Preparation and Conduct of Military Reform," developed by a group of People's Deputies of the USSR, and signed by V. Lopatin, USSR People's Deputy, acting first deputy chairman of RSFSR

State Committee on Public Security and Coordination with USSR Ministry of Defense and USSR KGB]

[Text]

I. The Need for Military Reform

Positive improvements in the world, a significant reduction in the level of military threat, the priority of nonviolent means for ensuring international and domestic security, and revolutionary perestroika in the country demand a profound transformation of defense and of the USSR Armed Forces in accordance with the country's real needs and economic potential. The first steps in this direction have been taken: the content of defensive doctrine is being deepened and concretized and the process of its realization has begun, reflected in particular in the reduction of the Armed Forces and armaments, which is being carried out. But the process of renewal of the military sphere is proceeding slowly and is oriented basically toward quantitative changes. The majority of steps being taken are of a limited nature and do not permit moving the country's defensive capability to a qualitatively new level.

The absence of precise legal regulation and of an effective state mechanism for formation and implementation of military policy, for organizational development and employment of the Armed Forces, and for control over them on the part of USSR legislative and executive agencies and of society aggravates the crisis of the entire defense sphere and does not preclude a repetition of erroneous decisions on the Army's employment inside and outside the country.

The transition of the union republics to real sovereignty demands fundamentally new approaches to military organizational development and the adoption of cardinal measures aimed both at ensuring security of sovereign states as well as at accomplishing conversion within the framework of economic reform and a transition to market relationships.

However, the allocation of an excessively high share of the gross national product to defense, the diktat of the military-industrial complex, and the uncontrolled arms race at the expense of their quality are leading to an intensification of the economy's instability and a curtailment of social programs.

The profound crisis which has gripped the USSR Armed Forces led them to nonconformance with modern demands for ensuring national security, which generates the people's just alarm. Increased instances of tragedies involving military equipment, the death of people in peacetime, and the mockery and humiliations flourishing in the Army and Navy lead to a growth of anti-Army sentiments and boycotting of conscription for active military service.

The extremely unfortunate state of material and social-everyday support of servicemen and their families as well as negative processes in the Armed Forces generate

growing dissatisfaction and social apathy in officers, a mass yearning to break with their profession, and reduced interest in service.

Tension is intensifying in the Army and Navy, dictated by their reduction under conditions of servicemen's lack of legal protection and practical deprivation of many elementary civil rights, and by the absence of social reference points for perestroika of the country's military organization. This situation is aggravated by the unprepared withdrawal of Soviet forces from other countries and by the absence of a well thought out plan for their redeployment and establishment with consideration of socioeconomic conditions of regions as well as of the rights and capabilities of sovereign republics.

Along with this, the objective need for military reform is dictated by an aggravation of the following basic contradictions:

between the urgent need for developing and implementing military policy based on principles of sovereignty of the people and of the priority of nonviolent means of ensuring national security, and the absence of necessary structures of state authority as well as of legal mechanisms for accomplishing these tasks;

between the process of arms reduction and conversion of military production that is gathering force, and the desire of the military-industrial complex to maintain its previous positions and preserve military programs and an Army that do not correspond to the country's economic capabilities and the program for transition to the market;

between profound structural transformations in the state and society and a lag of similar transformations in the Armed Forces and in other military force elements;

between the requirement to strengthen the sovereignty of republics and the absence of republics' opportunities for fulfilling the right of independent and joint resolution of questions of state security, defense and military organizational development;

between the Army's constitutional purpose and its use in spheres that are uncharacteristic of it;

between objective demands for removing ideology and the party from the Armed Forces and the partocracy's attempt to preserve the Army as a tool of its authority;

between the Army's high statewide significance for the country and the absence of social-legal protection of servicemen and of necessary socioeconomic conditions for their vital activities;

between the need for high professionalism of the Armed Forces and their existing structure and manpower acquisition and personnel training system;

between the need for democratization of internal Army relations and the mechanism for suppressing a serviceman's individuality that has taken shape.

II. Principles of Military Reform

An analysis of the objective conditions and patterns determining the status and development prospects of the defense of the country permits the formulation of basic principles for the development and conduct of military reform. The following should be included among them:

2.1. Guaranteed assurance of the security of the country based primarily on qualitative factors in the system of national and collective security.

2.2. Voluntary delegation by republics to the center of powers defined by law in the sphere of defense of the country.

2.3. Optimization of state-authority and administrative structures functioning in the sphere of forming military policy, making decisions and monitoring their fulfillment.

2.4. Assurance that the military department under the control of the supreme state agencies and society as a whole with full glasnost and maximum possible openness.

2.5. Conformity of Armed Forces organization and size to the level of real military danger and the country's capabilities.

2.6. Phased reduction and professionalization of the Army based on a contract system of manpower acquisition and on an increase in every citizen's personal incentive for quality accomplishment of the tasks of the defense of the country.

2.7. Democratization and humanization of internal Army relations and bringing society's entire military organization into line with principles of a rule-of-law state and rules of international law.

2.8. Consideration of national-historical traditions and progressive domestic and world experience of contemporary military organizational development.

III. Content of Military Reform

The military reform represents the totality of the profound transformations of the state's military policy and economy, Armed Forces organizational development, and the system of defense leadership with the objective of bringing them into line with the level of real military danger, with the country's capabilities and with its new national-state organization by carrying out radical state-legal and organizational measures along the following directions:

3.1. Formation of Military Policy

The initial condition for forming military policy is assurance of the real involvement of all society both in developing this policy as well as in establishing effective civilian control over its implementation.

3.1.1. Military policy is developed and implemented for purposes of countering military threats in the system of the overall security of the country. The priority in choice of defensive measures is determined by supreme bodies of legislative power of the community of sovereign states.

3.1.2. A determining principle of military policy in a community of sovereign states is the joint resolution of questions of defense organizational development and development of the Armed Forces, which presumes the following: —each sovereign state's right to delegate necessary powers to the center for ensuring its security and for creating joint armed forces with nuclear weapons on a treaty basis; —sovereign states' fulfillment of treaty obligations guaranteeing security of the community as a whole; —sovereign states' right to have their own armed formations and reserves, with the center granted the possibility of their use to ensure the community's security against an external military threat; —exercise of control by authorities of sovereign states on all questions of the center's competence in the sphere of defense and security.

The sphere of joint competence and joint activity includes the following: —determining possible military threats and appropriate level of defense sufficiency; —developing military policy, doctrine, and the military reform concept and program and determining the order of their realization; —conducting talks and concluding international bilateral and multilateral treaties on questions of disarmament, reduction of armed forces and arms, and their stationing and employment; —developing, adopting and fulfilling a military budget, and preparing and implementing defense programs; —determining advisable amounts of material-technical resources of each sovereign state expended in support of community defense; —determining the status of military industry, conditions for stationing its facilities on territories of sovereign states, and relationships with the civilian sector of the economy and with the Ministry of Defense; —preparing and implementing the conversion program and determining conditions for using freed-up military installations and equipment in the interests of the economy of sovereign states and the community as a whole; —determining the jurisdiction of sovereign states and the center with respect to communal armed forces and their status, strength, location, activities and conditions of presence on the territory of sovereign states; —training reserves and maintaining supplies; —employing communal armed forces in emergencies for mopping up in the aftermath of natural disasters, major accidents and catastrophes and for accomplishing economic tasks in an economic crisis; —appointing and promoting commanders of formations and commanding generals of large strategic formations located on the territory of sovereign states; —placing armed forces on the territory of sovereign states in heightened degrees of readiness, mobilizing the reserve, moving armed forces, and conducting exercises (from formation and higher) and military parades; —determining the procedure for

stationing, testing and eliminating nuclear and other kinds of mass destruction weapons on the territory of sovereign states and organizing radiation, chemical and bacteriological monitoring; —developing and implementing a set of political-legal and organizational-technical measures which precludes the unsanctioned use of mass destruction weapons and ensures safety in handling them.

3.1.3. To this end a military-political alliance of sovereign states is concluded, coalition command and control entities are established, and an institution of representatives of sovereign states is established in central and republic agencies of authority and administration.

3.1.4. Political, administrative and strictly military levels are distinguished in the structure of military-political leadership and a system of interoperation is created among them in determining each one's zones and measures of responsibility.

3.1.4 (I). The President, the Supreme Commander, whose actions in employing the Armed Forces are governed by law, heads the system of interoperation of the above structures and levels of command and control. This system's effectiveness and flexibility is ensured through the specific-program methods of planning, forecasting and analyzing the most important problems of military policy and military organizational development.

3.1.4 (II). Primacy of political leadership is achieved through a strengthening of the authority of legislative bodies of the community of sovereign states by granting them exceptional rights and powers in making decisions on the following questions: —approving the legal foundations of the organization of defense and the Armed Forces and the concept of military policy and doctrine, and adopting laws governing military organizational development and the military budget (overall and by item); —determining the size of the Armed Forces and reserve, terms of service and training, and quantitative and qualitative makeup of military equipment and arms; —organizing studies and hearings on military-economic and military-political problems, including regular accounts by heads of ministries of the military-industrial complex, Ministry of Defense and other departments; —appointing a civilian with full accountability to the position of Minister of Defense.

The following are the conditions for implementing the above rights: the transition from party leadership to state leadership on a legal basis; the reorganization and creation of collegiate structures of legislative and executive power in the sphere of defense management, realistic assurance of the possibility of all political parties and public organizations participating in forming military policy before decisions are made; and maximum openness and glasnost at the level of international information standards without detriment to the security of the country.

3.1.4 (III). As an administrative leadership agency, the Ministry of Defense organizes interoperation with agencies of legislative and executive power, public organizations and the mass media; assesses the military-political situation and determines the degree of the military threat; prepares the military-technical bases for political decisions, participates in forming the military budget and accomplishes other tasks.

3.1.4 (IV). As an independent central military control and control organization, the General Staff, together with other command and control organizations implements military-political and military-technical decisions through strategic and operational planning and through the immediate organization of Armed Forces combat training activities and combat activities.

Corresponding structures of the General Staff and organizations controlling troop combat activities are optimized, their makeup is qualitatively renewed on a competitive basis, and the role of communications, intelligence-gathering and command and control systems is strengthened to effectively accomplish these tasks.

3.2. Reorganization of the Armed Forces

A phased transition to professional Armed Forces of lesser size and better quality with a volunteer method of manpower acquisition, an interethnic makeup and the preservation of universal military obligation in wartime is the principal idea of military reform.

3.2.1. The transition to a professional Army can be made in the following sequence: transfer of NCO's and technical specialists from among first-term servicemen to a professional status; total transfer of the most prestigious and technically best equipped branches of the Armed Forces and types of troops (Airborne Troops, Navy, Air Force, Strategic Missile Forces) to a professional basis; probable completion of full transition to a professional volunteer Army within 4-5 years.

A mixed method of Armed Forces manpower acquisition, which envisages a combination of voluntary entry into the Army based on a contract (up to five years) and the conscription of civilians for performing service according to the territorial principle for up to 18 months, as well as the introduction of alternative service for a period of from 18 months to 3 years, is used in the transition period.

3.2.2. The basic functions of the Armed Forces are to prevent war, ensure external and internal security, and protect the territorial integrity of the community of states.

A decision to employ the Armed Forces is to be made by supreme bodies of legislative power of the community of sovereign states, and in exceptional instances provided by law, by the President, the Supreme Commander-in-Chief.

3.2.3. The Armed Forces and other military troop formations (MVD Forces, Border Guard Troops, Civil Defense Troops) are consolidated in a unified defense system. Make the principle of their organization according to strategic designation and defense sufficiency the basis of the new Armed Forces structure.

To this end: —reorganize the main sector commands as strategic commands in a TVD [theater of military operations] with reorganization of branches of the Armed Forces and the elimination of the military districts; —provide for strategic and general-purpose forces as well as rapid reaction forces in the troop makeup; —include the Railroad Troops and all Construction Troops in the Armed Forces with a change in their functions and cessation of use as a labor army; —ensure priority of the newest technologies and contemporary models of arms and combat equipment in military-technical policy, and the introduction of command and control systems; —change the ratio of specialist categories through a reduction in the number of highly paid general and officer positions, a concomitant increase in the proportion of civilians and NCO's, and an increase in maximum age for contract service for highly rated specialists.

3.2.4. The following is proposed for transformations in the sociopolitical and legal spheres of vital Armed Forces activities: —democratize the Army, eliminate the party from it and prohibit persecution for voluntarily leaving the CPSU; humanize internal Army relations, change the status of the individual serviceman, the reserved conservative nature of internal Army usages and the tenor of barracks life, and ensure full freedom of conscience and religion in accordance with the law; —create the necessary conditions for servicemen's professional activities and for comprehensive social-legal protection through a redistribution of the military budget from arms and equipment purchases to social needs and the preparation and implementation of state social programs; —under conditions of a transition to the market, ensure a standard of living of servicemen no lower than that of civilian specialists of corresponding qualifications with consideration of inflation processes.

3.2.5. Provide the following for realizing servicemen's rights and freedoms: —establish deputies' committees and commissions on questions of servicemen's social and legal protection at all levels of state authority; —establish an institution of representatives of supreme bodies of executive power on questions of servicemen's rights and appeals in each republic, kray and oblast center; —reorganize the military tribunals as military courts and remove military judicial agencies from actual dependence on the military command authority with elimination of military ranks in them; —invest the Officer Assemblies with the entire range of rights of social protection for servicemen and self-government of the officer collective; —grant servicemen the guaranteed right to establish and participate in their own trade unions and other military-social organizations; —establish a military-legal service in the Armed Forces

(assistant to the Minister of Defense for Legal Affairs, services in branches and combat arms, legal services officers in units); an information and public relations service; a social-psychological service consisting of sociologists, psychologists and psycho-physiologists; a service for social-everyday and cultural support for servicemen and their families.

The above services are established based on reorganized political organizations.

Provide for competitive professional selection from the existing complement of political workers with a reduction in their numbers, use of specialists of civilian universities with an increase in their graduation, and reprofiling of military-political higher educational institutions as priority measures for manning such services with specialists.

3.2.6. The Army's transfer to a professional basis must be facilitated by a reorganization of the military cadres training system at all its levels: —basic training and professional orientation based on a reorganized DOSAAF and reserve training units with the involvement of a newly created professional selection service included in the reorganized military commissariats; —professional training of a larger number of technical specialists in civilian higher educational institutions and of officers, warrant officers and junior command personnel in military schools of the appropriate profile with their consolidation and reduction; —in-depth combat training based on large, comprehensive combat training centers for all categories of military cadres and graduates of civilian higher educational institutions; —academic training in military academies (one for each branch of the Armed Forces) and in courses at the academies for raising qualifications and for training general and flag officers.

The following are necessary conditions for this system to function: —reorganization of military cadre entities with the introduction of special training for their personnel; —a competitive professional selection of available officers and warrant officers under conditions of a reduction in their numbers as well as during their passage through all training levels and during advancement in service, with great rights granted to servicemen's assemblies; —organization of military cadres training with consideration of the interests of sovereign states included in the community; —outfitting of training systems at all levels with the necessary amount of modern military equipment, including that from the present reduction in such equipment, and broad computerization of the training process.

3.3. Reserve Training

Military reform presumes the establishment of a system of reserves formed by the territorial principle and including the following: a professional first-order reserve manned on the basis of voluntary enlistment in it under contract; a second-order reserve of former servicemen

from the regular troops as well as of former first-order reservists; a third-order reserve of former servicemen who are retired.

A precondition for raising the quality of reserves is a reduction in their overall number with an increase in the role of the professional reserve and with an optimum number of permanent personnel.

The following are conditions for accomplishing these tasks: —reorganizing DOSAAF for training high-quality specialists in leading specialties for service in the Army and in the organized reserve; —transforming the system of regular units for training first- and second-order reserves; —establishing territorial training centers and using republic formations; —forming a Union of Armed Forces Veterans both to provide social protection for and to unite former servicemen as well as to assist in the functioning of third-order reserves, and organizing its interoperation with military trade unions; —establishing a system for professional orientation toward and the selection of citizens for service in the Armed Forces and in the reserve, with the reorganization of present military commissariates.

3.4. Financial and Economic Support

The following measures are to be carried out in order to achieve the objectives of reform in the military-economic sphere: —within the framework of a military-political alliance of sovereign states, a methodology for forming and a procedure for approving and fulfilling a military budget is to be worked out, and republic entities for monitoring and analyzing use of budget resources for military purposes are to be established; —a military budget for financing all defense expenditures, given the change in its [the budget's] structure in favor of supporting upkeep of Army personnel and bringing the structure of defense expenditures into line with UN recommendations is to be consolidated in the USSR Ministry of Defense —the scale of the conversion of military production is to be optimized, based on an analysis of the state's budget capabilities under conditions of a transition to the market; —a new system of price formation on arms and military consumption is to be worked out, and cost accounting of the presence, status and use of equipment at the tactical level is to be organized at arsenals and storage facilities by territories; —the Armed Forces' share in creating gross national product is to be assessed, considering the activity of the Ministry of Defense production sphere, and it is to be reorganized in terms of the transition to market relationships.

Budgetary appropriations for accomplishing the objectives and tasks of the military reform are to be sought from the following: —a significant reduction in numerical strength of Armed Forces personnel and the direction of servicemen being discharged to the country's national economy; —a reduction in financing of military programs, in production volumes and in arms and equipment procurements on the basis of military-economic

and military-technical expert appraisal, as well as from a reduction in the number of accidents, breakdowns and disasters and an increase in equipment life given a transition to a professional Army; —establishment of an optimum, economic military cadres training system with a large reduction in the number of military schools and academies and the reprofiling of some of them as centers for training junior command personnel and specialists by branches of the Armed Forces; —a change in the table of organization and billet structure of command and control entities by reducing their size, eliminating intermediate levels, and increasing computerization and automation of command and control; —the expanded use of civilian specialists in the Army and Navy in place of servicemen in billets in administrative-management organizations and in logistic, medical and financial support organizations, as technical specialists, and in military science; —unification of civilian and military production with a more effective combined use of advanced technologies and NIOKR [scientific research and experimental design work] with reduced classification and secrecy; —elimination of the shadow military economy and costly privileges for highly placed superiors.

IV. Phases in the Preparation and Conduct of the Military Reform

Phase I (1990-1991): —discussion of the Military Reform Concept in committees and commissions of the USSR Supreme Soviet and the supreme soviets of the

republics, with the civilian and Army public, and in the mass media; —discussion and adoption of statutes of the supreme soviets of the sovereign states on the Military Reform Concept; —establishment in supreme legislative bodies of commissions for preparing and conducting military reform within the framework of formation of a general security system of the community of sovereign states; —development and discussion of a special military reform program with the involvement of the country's major scientific personnel, Armed Forces specialists and the public on an alternative basis; —organization of large-scale research in the Army and society in accordance with a special program; —preparation and implementation of State programs of priority measures for supporting a reduction of the Armed Forces and conversion of military production.

Phase II (1991-1993): —accomplishment of a comprehensive experiment for making a transition to new conditions of manpower acquisition and service in the regular troops (based on selected formations and branches); establishment of republic formations and a professional reserve; and the introduction of alternative service; —development and adoption of a package of final legal documents on implementing the military reform.

Phase III (1993-1996): —fulfillment of the tasks and provisions of the military reform to the full extent.

Chief of Medical-Biological Services Interviewed

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in Russian No 9, Sep 90 pp 32-33

[Interview with Major General V. Frolov, chief of the Medical- Biological Service Protection Service, USSR Civil Defense; date and place not given; first two paragraphs are VOYENNYE ZNANIYA introduction]

[Text] The accidents, natural calamities and other disasters that have occurred in various areas of the country in the last few years have caused the national economy to suffer substantial losses. Most serious, however, is the loss of life. How are we to act in an emergency to prevent casualties, rescue victims, and render qualified medical assistance on short notice to those who are suffering?

This is the subject of our correspondent's interview with Major General V. Frolov, RSFSR Merited Physician, who is chief of the USSR Civil Defense Medical-Biological Protection Service.

[VOYENNYE ZNANIYA] Viktor Fedorovich, I would not be far off the mark if I were to say that most readers have only a vague idea of the service you head, while others have not heard of it at all. Of what does it consist, and what is its main purpose?

The Medical-Biological Protection Service is the medical arm headed by the chief of USSR Civil Defense, who is a deputy USSR defense minister. It develops and coordinates medical and antibacteriological work for protecting the population in emergency situations; coordinates the activities of ministries and departments involved with medical and antibacteriological protection of the population and with the formation, training, and equipping of medical units and institutions; and it draws up the principal legislative and normative documents dealing with these problems. Working jointly with the USSR Ministry of Health, it approves and makes individual protection equipment available for civil defense and arranges for distribution of this equipment to the population and to Civil Defense units. Also in collaboration with the same ministry, its function includes the implementation of the requirements set by the 1987 decree of the CPSU Central Committee and USSR Council of Ministers restructuring civil defense by the organization of emergency medical service in the country.

[VOYENNYE ZNANIYA] The decree you mentioned requires that greater attention be paid to the resolution of peacetime tasks. Does that mean that previously, when our civil defense was oriented toward a possible wartime environment, these tasks were not included in the service's area of interest?

[Frolov] Certainly not. Long before the decree was passed, civil defense organs developed a large set of measures—including those of an organizational nature—designed to cope with the effects of accidents, natural calamities, and other disasters, and to create and

employ the necessary forces and equipment to accomplish this. After studying the experience gained by medical personnel in their countering of the effects of the accident at the Chernobyl AES and accidents in Bashkiria, Arzamas, and a number of other places, we made certain changes in the tactical and specialized training of personnel and in the creation of more mobile forces and equipment capable of operating effectively under emergency conditions. We have not yet been able to make everything that we wish a reality, but we have resolved all questions in an adequate manner.

[VOYENNYE ZNANIYA] Would you care to discuss the unresolved problems later and discuss medical assistance for the population, primarily timely and expert medical help for victims of accidents, natural calamities, and other disasters?

[Frolov] This is where we employ medical treatment facilities and medical units patterned after them. Of decisive importance of course are clinics and first aid stations. The civil defense medical units that may be used in emergency situations include medical teams, first aid detachments, specialized medical aid brigades, mobile antiepidemic detachments, and epidemiological reconnaissance groups. A major accident, natural calamity, or other disaster may require the employment of civil defense mobile medical units, primarily motorized medical detachments and squadrons. Civil defense employs a two-stage treatment and evacuation system to serve the population in emergency situations.

[VOYENNYE ZNANIYA] Please explain.

[Frolov] In the first stage, directly at the scene of the disaster or in the near vicinity, the victims are rendered first aid—that administered to oneself and to others in close proximity—with personnel of civil defense units and formations applying their skills. The second stage involves expert specialized medical assistance followed by the therapy necessary to effect complete recovery.

[VOYENNYE ZNANIYA] I assume that that kind of treatment and evacuation is called for only in the event there are inadequate facilities in the field to treat victims or when medical resources are unable to function.

[Frolov] That is so. Incidentally, that kind of situation obtained after the earthquake in Armenia and the accident in Bashkiria. In the event it is possible to organize treatment at the scene of the disaster, there is no need to set up intermediate medical evacuation stages. Examples are Bologoye, Arzamas, and Sverdlovsk. The victims were evacuated to treatment facilities immediately after receiving medical attention.

Two periods must be recognized in the aftermath of accidents, natural calamities, and other disasters: the rescue period, involving all types of medical treatment as indicated by vital signs, and the restoration period, involving treatment and rehabilitation of the sick and wounded.

[VOYENNYE ZNANIYA] What time frames are associated with those periods?

[Frolov] That depends upon the extent of injury. The rescue period is two to four hours in case of chemical accident, up to five days after an earthquake; the restoration period is two months and longer. In addition, the first period may include isolation of the disaster site for 30 minutes to six to 10 hours. These factors are taken into account to organize assistance efforts.

[VOYENNYE ZNANIYA] In what sequence does that take place?

[Frolov] Immediately after an accident, natural calamity, or other disaster, rescue work is undertaken by quick-reaction forces: rescue teams and groups, medical teams and posts, and regular rescue services. They pull victims from rubble and carry them on stretchers or motor vehicles out of the danger area to an assembly point. At the same time, rescuers and medical teams render first aid to the sick and wounded. This is where self-administered and mutual first aid comes into play. This very often in emergency situations means the difference between life and death. That is why the population should be trained in self-administered and mutual first aid. However, that in itself could be the subject of a separate and lengthy discussion.

[VOYENNYE ZNANIYA] That being the case, let us continue speaking about developing the disaster situation.

[Frolov] And so, in 10 to 30 minutes, firefighting teams, first aid brigades, and militia subdivisions arrive on the scene. Incidentally, they are also a part of the quick-reaction forces. The first aid brigades categorize the victims, render primary physician attention, and perform evacuation. The respective civil defense chiefs and chairmen of emergency action committees should assume responsibility for evacuation.

One to three hours after an accident or natural calamity occurs, treatment facilities are to have available the necessary number of beds.

In emergency situations on the rayon or city scale when the casualty count is low, these forces are sufficient to accomplish rescue work in a short period of time. Large-scale disasters in which casualties number in the thousands and more will require that forces be brought in from other cities and areas of the country. In this connection, the size of forces necessary for rescue should relate to the actual need.

Another very important condition for units to perform effective work in a disaster area is that they be completely self-sufficient with respect to food supplies, power, and water, to say nothing of medical equipment and supplies, of course.

[VOYENNYE ZNANIYA] Viktor Fedorovich, based on past experience, what can you tell us about the effectiveness of first aid for victims?

[Frolov] That is measured in terms of the number of fatalities prevented one day after a disaster strikes. The rationale behind this is that failure to render first aid by the end of the first 24-hour period can result in a mortality rate of up to 85 percent of the sick and wounded. The rendering of first aid alone reduces this figure to 20 percent.

With that as a basis, if we evaluate the effectiveness of first aid during an accident, natural calamity, or other disaster and express that as a percentage, we arrive at the following. In the Arzamas railroad accident, there were 744 victims, a potential mortality of 6 percent, an actual mortality of about 7 percent; first aid effectiveness was 85 percent.

In the gas line explosion that occurred in the Bashkir SSR, there were 1,284 casualties, a potential mortality of 13 percent, an actual mortality of 21 percent; first aid effectiveness was 61 percent. Finally, in the earthquake that occurred in Armenia, there were about 40,000 victims, a potential mortality of 15 percent, an actual mortality of 62 percent; first aid effectiveness was up to 25 percent. The very poor effectiveness figure was due largely to the inadmissibly long time it took to pull victims out of the ruins.

There can also be no doubt about the effectiveness of employing iodine solutions to treat victims of the Chernobyl AES accident. Iodine prophylaxis was initiated directly at the site and in the town of Pripyat, two to four hours after the accident occurred. It was determined to be highly effective in warding off cases of damaged thyroid glands. At the same time, two days passed before a decision was made to apply this prophylaxis in certain areas located within a 30-kilometer zone. As a result, the thyroid gland in more than 2,000 children was irradiated in doses that exceeded 500 rads. There can be no talk of a high degree of effectiveness in this case.

The application of new intensive therapy techniques in the case of victims suffering the prolonged compression syndrome in Armenia proved beneficial. This kind of trauma was observed in 40 percent of the wounded, with mortality in this group registering about 25 percent. Comparative figures for this category of wounded in earthquakes are 79 percent mortality for Ashkhabad (1948), almost 50 percent for Morocco (1960) and Italy (1980).

The Bashkiria occurrence evoked effective use of new prophylactic techniques to ward off infection complications in burn victims. Special attention was paid in the restoration period to protection from secondary infection by employing modern approaches, a step that had a significant influence on the casualty outcome and made it possible to effect a considerable reduction in mortality. That kind of measure can be taken only if specialized medical assistance is at the scene.

[VOYENNYE ZNANIYA] There are also unresolved problems in the medical aspects of accidents, natural calamities, and other disasters. What can you tell us about them?

[Frolov] First of all, there is the insufficient mobility of our medical units. Incidentally, their organizational structure and equipment are presently under review, with the intent of reducing to a minimum the time required to ready and transport them to the scene of an accident, natural calamity, or other disaster. The medical service is still undersupplied with medications, bandaging materials, syringes, and infusion systems. This is one area in which there is a severe deficiency, which is felt especially in the first few hours and days after the occurrence of a disaster.

Continuing to be a serious problem is the quality of training of medical workers and the population regarding actions to be taken in emergency situations. Increasing importance attaches to the kind of training of

health organs and institutions that would be applicable to situations most likely to occur in a particular locality. This requires the availability of good instruction manuals and training aids, in addition to modern devices and individual protection equipment for the respiratory organs and skin.

Major changes are needed in the approaches to scientific research into emergency medicine.

Incidentally, many problems of great concern to us are presented by VOYENNYE ZNANIYA. I would like to see the magazine deal with medical topics on a regular basis.

[VOYENNYE ZNANIYA] Thank you for the interview.

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"Patriot", "Voyennyye znaniya", 1990

Deputy Chair, Education Committee on Pre-Draft Training

91UM0076A Moscow VOYENNYE ZNANIYA
in Russian No 9, Sep 90 pp 10-11

[Interview with G.F. Kutsev, deputy chairman of the USSR State Committee for Public Education, by special correspondent L. Romanov; date and place not given: "New Program: Accents Removed"]

[Text] *He is 51 years old. Trained as an agronomist, he holds the degree of doctor of philosophical sciences and is a professor of sociology. He did not serve in the Army; he completed a course of studies in a VUZ [higher educational institution] military science department. He was recently awarded the rank of reserve colonel. He accepted his present position two years ago, after having served as Deputy Minister of Higher and Secondary Specialized Education of the RSFSR. He is in charge of the humanities, nurturing, and education systems, including NVP [initial military training] for secondary school students. G. Kutsev, deputy chairman of the USSR Committee for Public Education, responds to questions by VOYENNYE ZNANIYA special correspondent L. Romanov.*

[Romanov] Gennadiy Filipovich, in your answer to the question of what NVP is to become (VOYENNYE ZNANIYA, No 11, 1989), you had definite opinions relative to the present condition of the training given youth, stating that public education workers are looking for ways to improve it. What has been accomplished so far?

[Kutsev] Let me answer your question by reading from a letter: "There should be no need for my proving that NVP as presently organized took shape during the years of stagnation...it does not accomplish the main goal of developing in youth the state of physical fitness necessary for carrying out military duties...I, therefore, suggest that the following be done: Eliminate NVP in its present form; effect a substantial increase in hours for teaching physical fitness; establish physical training on a daily basis, starting with the first grade, making it nonelective; introduce into the program instruction in practicing applied military skills; restore mandatory GTO [Ready For Labor and Defense (physical training norms)] exercises for pupils in lower classes; require that public education organs and school administrations adopt a serious attitude toward physical training for adolescents..."

The above letter was written by the chief of the Pskov Oblast Rifle Sports Club of the DOSAAF [Voluntary Society for the Promotion of the Army, Aviation, and Navy]. Public sentiment is in virtually complete agreement with the basic argument of the letter.

The processes occurring in society cannot be ignored. That is why we in developing the new predraft training program attempted to shift the emphasis from purely military to physical training of youth. I will not enter into detail here, but merely limit myself to saying that

the school should produce a physically healthy young man—one that is prepared to serve in the Army. Whether he knows how to shoot or not is unimportant. Military specialists are of the opinion that he can be quickly taught to shoot in the Army.

[Romanov] Since you are so definite in your views, why do you think it took so long to produce a predraft training program?

[Kutsev] Only because a good program cannot be produced very easily or quickly. A draft program was sent out to public education organs and military district offices for study. The document went through "massaging," so to speak, in a number of schools and SPTUs [Rural Vocational-technical Schools]. We considered the resulting comments, then rewrote it in collaboration with the USSR Ministry of Defense. The end product is more responsive to present requirements. In the program, we effected a considerable reduction in classroom time devoted to theory and general military training; introduced a special section—applied military training; and we increased the time given to health and hygiene and working out complete exercises via gaming. We included as the culmination of training a stay at a defense sports and health camp, with the stay limited to the regular training schedule. Education organs and schools are granted more independence in their choice of teaching approaches. They may administer the predraft training either one or two hours on a weekly basis, or five to six hours in one day once a month at training centers, or they may combine the approaches. The main consideration is obtaining good results. We do not want to dictate from Moscow; the school is to exercise freedom of action.

[Romanov] Is it possible that the freedom of selecting the approach to administering predraft training you propose may have the effect of squeezing the subject out of the general educational school system?

[Kutsev] No. I can assure you that it will be taught. We have developed special predraft and physical training programs, but the actual subjects will be taught in a different manner. In addition, for pupils in upper classes we are expanding the system of boarding schools teaching military subjects. Our experience indicates that this is one of the acceptable ways to get youth to think about the military as a career.

[Romanov] Who worked with the Ministry of Defense on the program to establish priorities?

[Kutsev] We work in collaboration with the military. There was a time when they would come into my office, set out papers on my desk and demand that I sign. That no longer is the case. We are the ones that the state holds responsible for pupil training, including predraft training. We are the ones on whom the requirements are laid, so let us go ahead and do our work. We maintain close contact with the USSR Ministry of Defense as we do this, of course.

[Romanov] Why have you adopted this particular attitude?

[Kutsev] Because we have a better understanding of school interests: relating physical training to technical, military, and labor training, and, finally, to the capabilities of schools.

[Romanov] Do you not have any apprehension that the predraft training program has come about late with respect to the new school year?

[Kutsev] We are doing what we can. Do not forget that the creation and organization of NVP are backed up by a large number of governmental decisions. Until the Law on Defense is passed, resolving the remaining problems would be simply premature. Nevertheless, we have furnished the predraft training program for use in the new school year, with the understanding that those who feel that they can work with it, those who are prepared for it, are encouraged to do so.

[Romanov] Do you suppose that all the energy that has been "wound up" in Moscow will merely go down the drain, wither away, before it gets to rayon public education administrations, schools, and SPTUs?

[Kutsev] In places, yes. But who can say that basic military training is at the same level in all schools? In one school the military training officer may be successful, while in a neighboring school that one may be doing poorly. This means that it is necessary to "wind up that spring" more tightly, not by using administrative command methods, but instead by example, by generalizing on experience. We have sufficient wherewithal in our arsenal. We can no longer afford to stand still: The traditional methods have been exhausted.

[Romanov] Has the Ministry of Defense been informed that you intend to take the initiative into your own hands?

[Kutsev] The Public Education Committee has always had the initiative you mention. We will not surrender it.

It used to be that we had it easy. There were three persons in the committee involved with NVP, while in the Ministry of Defense there were many more. We have retired officers; there there is an active-duty general in charge. It was quite convenient for us: They did everything, and all we had to do was sign our names. I said to my subordinates: "No more. From now on, work independently. You have military training officers, military subjects study rooms, military science departments, institutes. Go ahead and do your job."

[Romanov] When did you decide to take over the "management" of predraft training?

[Kutsev] In the winter. We were influenced by letters being sent in to us. That was when we agreed on the plan of basic instruction.

[Romanov] With the forthcoming market economy, how do you think a military training officer will be able to live on a salary of 175 rubles [R]?

[Kutsev] Other instructors live on exactly the same pay. Why single out the military training officer? Let him work: He has the right to earn half again over his salary. Those who are trained specifically as teachers are better off, of course, since they work with circles, in the DYuSSh [children's sports schools]. But realize that many military training officers are retired from the military. As such, they are not so badly off as far as public education workers are concerned. They all must be paid at the average nationwide level, of course. If a teacher is paid less, society will be doomed.

[Romanov] Based on your data, how much money is spent on military training?

[Kutsev] The comrades came up with an estimate of something more than R100 million. That is another reason why NVP could not be left as it was: We are wasting state money.

[Romanov] Do you read our magazine?

[Kutsev] When something is of direct interest, the comrades show it to me. The periodical is essential for schools and SPTUs.

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"Patriot", "Voyennyye znaniya", 1990

Student Voluntary Military Training

91UM0076B Moscow VOYENNYE ZNANIYA
in Russian No 9, Sep 90 p 11

[Article by A. Tarasov, candidate of pedagogical sciences, deputy chief of administration, USSR State Committee for Public Education: "On a Voluntary Basis: USSR Government Passes New Statute on Student Military Training"]

[Text] Must every specialist graduating from a VUZ [higher educational institution] become a reserve officer? Many students, mostly NCOs and enlisted personnel, replied in the negative, as far as they themselves are concerned, when asked this question. On this issue, students and the entire VUZ community are in favor of a voluntary military training program designed to produce reserve officers. Without entering into detail, it may be said that the concept became attractive to all spheres of society (including the USSR Ministry of Defense) a short time before the All-Union Students' Forum took place. The latter crystallized the discussion by winning over representatives of the various generations, the VUZ community, and the state apparatus.

Present at one of the forum's sessions was USSR Defense Minister Marshall of the Soviet Union D. Yazov, who spoke in detail about the tasks facing the USSR Armed Forces and the ways and means of accomplishing them.

An open discussion involved the development of suggestions that were incorporated into the resolutions passed by the forum. Another step was recently taken to implement them: The USSR Government has adopted a statute on training VUZ students for commissioning as reserve officers.

The training as introduced will be voluntary. On entering a VUZ, a student gives written notification of his intention relative to this instruction. Students who opt for the training and are physically fit are listed in an order issued by the VUZ, after which they take up the training plan as part of their studies. Instruction as a rule starts in the second or third year and ends one year before graduation, culminating in a training tour of up to 30 days in a military unit or training center. After the students complete their military training and pass their final exams, they will be commissioned as reserve officers at the entry-level rank.

Most military science departments employ as their method of instruction the "military day," scheduling that once every one or two weeks. This consists of lectures and small-group instruction under the supervision of an instructor (of six hours maximum duration) and two to three hours of independent study with optional class attendance, and of other measures included in the daily routine. Internal order within the military science department is guided by military regulations, a condition that promotes student acquisition of rules of military courtesy. Students enrolled in the military program are entitled to benefits while taking the training, as well as after graduation from the VUZ. Specifically, they are paid a larger stipend. Even larger payments are made to youths who have completed compulsory service before entering the VUZ. Their program of instruction is shorter, since they are given credit for their practical military experience.

Draft-eligible students who decline enrollment in the military training program upon entering a VUZ are granted a deferment so that they can continue their education. Upon graduating, they are subject to call-up for active duty under the USSR Law on Universal Military Obligation.

The new statute permits the offering of military training in inter-VUZ departments.

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Tajikistan Decree Restricts Military Draft

91UM0079A Dushanbe KOMMUNIST
TADZHIKISTANA in Russian 9 Oct 90 p 1

["Decree of the Tajik SSR Supreme Soviet: On Certain Questions of Improving the Draft of Young People of the Tajik SSR Into the USSR Armed Forces"]

[Text] Thousands of young men of the Tajik SSR [Soviet Socialist Republic] perform their military service in the

USSR Armed Forces annually. They are represented in all branches and arms of the service. At the same time, however, owing to a number of circumstances of an objective nature, a substantial proportion of conscripts performs its constitutional duty in military construction and construction and engineering units of the USSR Defense Ministry and ministries and departments of Union significance.

The difficult socioeconomic situation in which our society finds itself and the exacerbation of interethnic relations in the country have led to a complication of the crime-inducing situation, including in the Soviet Army. Negative phenomena in the Army milieu and the current nonregulation relations between servicemen are directly influencing the level of their operational training and causing concern among the community of the republic and near ones and dear ones.

For the purpose of the further assurance of the guarantees of compliance with the rights and liberties of citizens of the Tajik SSR drafted for active military service, and the defense of the interests of their parents and families, and also an improvement in the draft and the performance of their military service by the youth of the republic, the Tajik SSR Supreme Soviet resolves:

1. That young men of the Tajik SSR will be drafted into military construction and construction and engineering units as of the 1990 fall draft within the Turkestan Military District, chiefly in the Tajik SSR.

That the Tajik SSR Council of Ministers will prior to 1 December 1990 prepare proposals pertaining to the organization in the Tajik SSR of alternative service and the procedure of its performance by young men who in accordance with their state of health are not suitable for service in line military units.

2. To cease the draft for active military service of conscripts whose brothers have died in the performance of their duties in peace time in the ranks of the Soviet Army and also in performance of their international duty in the Republic of Afghanistan.

That the rayon and city draft commissions:

- grant deferments for young men being trained in secondary specialized educational institutions and vocational-technical schools of a construction-engineering profile for the period of the study and for one year following graduation from the educational institution provided that they work in the specialty they have acquired;

- send conscripts with families to perform their military service in units and subunits stationed on the territory of the Turkestan Military District, chiefly in the Tajik SSR;

- grant younger brothers deferments until older brothers have completed their service.

3. To establish supplementary benefits for compulsory service personnel who have become invalids as a consequence of disabling injury and also for families of servicemen who have died in the performance of their duties.

That the Tajik SSR Council of Ministers draw up prior to 1 December 1990 the procedure and conditions of the allocation of the supplementary benefits.

4. That the oblast, city, and rayon soviets of people's deputies and enterprises, establishments, and organizations step up sponsorship of military units in which young men drafted from the Tajik SSR are serving and provide for the allocation of monies for the organization of trips to the Army subunits by representatives of the community, veterans of war and labor, and figures of culture and art and the amateur arts, and the dispatch of books, periodicals, and motion pictures illustrating the life of the republic.

5. That the military commissar of the Tajik SSR adopt measures to strengthen the local military commissariats with personnel who know Tajik and the other languages of the majority population living in a given locality.

6. That the Tajik SSR Military Commissariat and Tajik SSR Supreme Soviet Committee for Legislation and Citizens' Rights and Appeals draw up draft regulations governing the military commissariat of the Tajik SSR and submit them for consideration by the Tajik SSR Supreme Soviet.

7. That the Tajik SSR State Committee for Television and Radio Broadcasting pay particular attention to the elaboration of military-patriotic problems in radio and television programs and extensive coverage of the status and problems of the performance of their military service by young men of the Tajik SSR.

[Signed] K. Makhkamov, chairman of the Tajik SSR Supreme Soviet.

[Dated] 5 October 1990, Dushanbe.

Georgia; 1990 Fall Draft

91UM0063A Moscow KRASNAYA ZVEZDA in Russian
27 Oct 90 First Edition p 2

[Article by Colonel V. Kaushanskiy, KRASNAYA ZVEZDA correspondent: "The Plenum Confirms and Approves...": "The Fall Draft"]

[Text] ...At first I thought someone was playing a joke on me. The voice on the telephone, not without irony, announced: "Come on over. We have a group of soldiers here who have deserted to Tbilisi. An informal group released them from army duty and even gave them a document to that effect." Then followed the address of the military unit located an hour's drive from the Georgian capital.

By the time I arrived, the escapees—Privates Tamaz Malatsidze, Emzar Odikadze, Teymuraz Batuashvili and

several other fellows—actually had already been turned over by their own parents who were angry at their dull-witted offspring. Only the ringleader of the entire group, Junior Sergeant Irakliy Kodagidze, was waiting for something in his father's house. Really, it is clear what he was waiting for: Irakliy's father, by the way, is a party worker, and undertook an urgent course of action to transfer his son to a new duty post, one that was, naturally, not far from home.

The return to the unit of the "prodigal sons" had been preceded by negotiations conducted by Lt Colonel V. Timoshichev, a political officer, at the headquarters of the Party for National Independence of Georgia (PNN). It was here that the escapees, or more precisely, deserters, had been turned over to the wardship of the implacable opposition. It was here, too, that the officer was personally handed a unique document that is worthy of being quoted: "I ask you to consider the following persons to be under the wardship of the Commission to Boycott the Soviet Army of Occupation, a component of the Party for National Independence of Georgia..." This is followed by the names of the servicemen and the signature: "B. Khakhishvili, Member of the Military Commission." And, of course, a seal, dimly reminiscent of being a facsimile of the bathhouse-laundry office seal.

I have to say that this incident did not have even a hint of sensationalism. It is totally banal and is in the same category as many other acts carried out during the days of the draft by both the aforementioned party of national independence and the Citizens' League of Georgia, as well as by a great number of other "implacable" organizations.

By the way, under the laws of the headquarters it is preferred not to keep the escapees. After all, these youths, muddled by anti-army propaganda, have to be either fed or for the sake of charity slipped at least a little money. The solution? In one of the soldiers' explanatory notes I read: "We were told to fill out the forms and take off. I later arrived home and from there my parents turned me over to the unit."

I shall add only the orders given to Private E. Odikadze in the PNN office, where "just in case," they took away his military ID card: "The main thing is that you are getting away from the military, and if you wind up in the militia—no problem. There, we have our people everywhere. They will help you out."

And the fact that they will help out cannot be ruled out. Workers of the Georgian military commissariats meeting in Tbilisi in the middle of October to discuss problems of the fall draft spoke very bitterly about the lack of any kind of action toward escapees on the part of law enforcement agencies. Their reports were really outcries of their souls against the existing lawlessness seen by these military commissariat officers in different regions of the Republic. For example, how can we not sympathize with Colonel T. Chkad, the military commissariat officer of Abkhazia? He himself and his subordinates

went around a dozen times to a number of the draftees' homes and listened to supercilious refusals to serve in "the occupation army." The prosecutor's office was given a list of over a hundred cases of "refuseniks," but in answer there was only silence.

Or, another example. How can we ignore the difficult situation of Colonel N. Tatarashvili, the military commissariat officer of Adzhariya? Party agencies of the Autonomous Republic announced to him that they have nothing to do with the draft, local authorities are waiting for elections to the Georgian Supreme Soviet in order to feel out the new trends, and parents of the draftees—scared by visitors from the "implacables" and by meetings with military commissariat workers—say that they don't know what to do because they have been given a warning. If their sons go into the Soviet Army, the family will be declared enemies of the people. Fear, just like hunger, has no friends.

But in Kutaisi the problem of the draft was resolved more simply. Last spring the informal groups disrupted the work of the city military commissariat by blockading the building, not allowing entry to workers, doctors, or draftees. According to Lt Colonel T. Khitarishvili of the district military commissariat, this fall local authorities made a decision regarding alternative service: to call up youths to work in the automotive plant where, allegedly, there has been a labor shortage for a long time. Arbitrary? On the contrary. It is nothing surprising if the reader acquaints himself with one of the points of the resolution of Kutaisi city, Lenin, and Avtozavodskiy district committees of the Communist Party of Georgia. Quoting from the newspaper, KUTAISKAYA PRAVDA: "The Plenum again confirms the position of the city party organization regarding formation of army units and approves the decision of the executive committee of the City Council on 'The Call-Up of Youths for Military Duty,' and believes that due to the conditions under which the Supreme Soviet of Georgia accepted the resolution and the de jure annexation of Georgia by the Red Army in 1921, there can be no draft of youths from the city into the ranks of the Soviet Army." Following this are improvisations on the subject of alternative service.

Today, however, these are not just improvisations, but reality.

I have two documents in front of me. One is a resolution of the Council of Ministers of the USSR, dated September 25 of this year, which deals with the fall draft into the Soviet Army. On a local "routing slip," addressed to Councils of Ministers of Abkhazia and Adzharia, the Executive Committees of the Soviets of People's Deputies of Yugo-Osetiya, cities and districts of the Republic, and the Georgian military commissariat, is a resolution from N. Chitanav, Chairman of the Council of Ministers of Georgia: "For Direction and Execution," dated October 3rd. Only five days later, under the same signature, comes resolution No. 561, "On Work (Alternative) Service." It has three appendices with detailed

descriptions about how, where, and who may be eligible for this work service, and under whose aegis. The main thing is the basis on which it can be done. The preamble of the resolution reads as follows: "In connection with the beginning of the regular draft into active military service and with the goal of adhering to the law passed by the Supreme Soviet of the Georgian SSR on June 20, 1990, citizens of Georgia who are between 18 and 27 years of age, and are on the draft list as being subject to call for active military service, and who are refusing service in the Armed Forces for political, religious, ethical, or pacifist reasons, are hereby called for work service."

Now every youth, and I underline every, announcing that he does not wish to serve in the occupation forces, can become an "alternative" type, which is what the officers of the Georgian military commissariats were talking about with such agitation at their meeting.

This was also the essence of a letter sent by Major General D. Pirtskhalayashvili, the military commissar of the GSSR, to the Chairman of the Presidium of the Supreme Soviet of Georgia which plainly states that the new law not only is disrupting the fall draft, but is also blocking the September resolution of the USSR Council of Ministers.

At any rate, a lot of questions have come up. How about answers? There are not too many, all the more so because those "very important persons" officially invited to the afore-mentioned meeting from the Council of Ministers, Ministry of Public Health, MVD, Ministry of Justice, and the republic prosecutors' did not show up; in other words, those persons who actually make decisions and are not merely representatives. It is entirely possible that they are all busy. It is entirely possible that they will await the results of the coming elections to the Supreme Soviet. But does this make it easier for anyone? Perhaps it is easier for the military commissariats, thrown to the mercy of fate by the local authorities, who stand one-on-one against the "street" that passionately wants to disrupt the draft.

Anyway you put it, this situation is akin to the fairy tale about the white little bull. Meanwhile... Meanwhile, according to Lieutenant General N. Zvinchukov, chief of staff of the Transcaucasian Military District, the Republic has over one thousand escapees from military units. For now, the more radical opponents have promoted the military commissar of Georgia to the rank of "enemy of the nation." For now, the Irakliys, the Tamazes, the Gochis, and the other fellows, having given in to "special processing" by various meeting leaders, are recipients of indulgences from those same leaders and are absolved from sin for refusing to serve the "occupiers." Everything is in order. Everything is sealed and signed.

But, asked the military commissariat workers, what are we supposed to do then? What should our attitude be towards our duty as officers in light of this newborn law

about alternative service and the vicious anti-army campaign? Laws passed by the local authorities are contrary to both the Constitution of the USSR and the Law on Universal Military Obligation. No one has rescinded these vital state documents, therefore, the situation calls for a full-time work schedule.

But there is also another answer. As I was finishing my work on this material, Colonel V. Sulaberidze, Chief of the Political Section of the Republic Military Commissariat, called the correspondents' office: Have you seen G. Gumbaridze's pre-election speeches on television? He announced that as of now Georgian youths will participate in alternative work service on the territory of the Republic, and will go into the army only if they wish to do so.

Will there be any who wish to do so? Personally, I doubt it. Still, I shall be curious to see what happens to the resolution of the Republic's Council of Ministers against the law of the USSR Council of Ministers regarding the start of the fall draft; I mean the resolution that reads: "For direction and execution".

Problems With Fall Draft in Belorussia Detailed

91UM0091A Moscow KRASNAYA ZVEZDA in Russian
4 Nov 90 First Edition p 4

[Article by KRASNAYA ZVEZDA correspondent Colonel A. Smolyanko: "Who Is Responsible for the Draft—Report From the Belorussian SSR Council of Ministers and Other Places"]

[Text] I climbed to the sixth floor in the imposing gray building. Here I became acquainted with I. Nedelyay—chief of the department of administrative organs. I cite only a small fragment of our conversation.

"Ivan Sergeevich, this is the first time that this year's Army draft is being conducted not by order of the Ministry of Defense, but in accordance with a decree of the USSR Council of Ministers. What has been done to implement it in a qualitative and timely way?"

"We did not prepare a special plan, and there is no need for one. We maintain close contact with the military district and the military commissariats...."

"Surely there are people in the Council of Ministers who handle draft questions?"

"There was such a person until not long ago, and his work had a positive effect. Recently, this position, in fact, was abolished...."

That was the conversation. That is why, I must confess, further words did not convince me that, as they said, there was no reason for concern, inasmuch as the draft is proceeding normally, and no critical problems are emerging. A discordant note in this calmness could also be sensed in Ivan Sergeevich's statement that not long ago the Presidium of the Belorussian SSR [Soviet Socialist Republic] adopted an address to the citizen's of

the republic with an appeal not to permit a disruption in this important state campaign and not to be influenced by those who are trying to drive a wedge between the Army and the people. Similar addresses, it is apropos to say, were also adopted by some veterans' organizations and labor collectives.

And so, having failed to clarify the real contribution of the Council of Ministers to the organization of the draft, I headed for the oblast draft center, which was located about a 10-minute walk away. Here the calm turned into a gale. The building, in fact, was blocked by numerous parents and friends of the draftees. Colonel A. Levchenko, the chief of the center, after learning what I was interested in, said frankly:

"I did not see representatives of the government for the many years that I served here. Lower ranking chiefs came here, heard me out, looked around, sympathized, and then their mission ended. And we were left one on one with our problems, of which there were many and that we could not handle by ourselves."

"Look," Levchenko led me to the window, "see how many people are forcing their way into our building. I asked the authorities to set aside some kind of a hall or room for the visitors, or at least to set up benches in the little public garden.... All in vain. I sent several letters to different offices to install two or three telephones (there is one for all of the officials). But I did not even get an answer."

Meanwhile, Major General V. Korotkov, the military commander of the republic, came out to the people, and questions and angry exclamations poured forth. It looked as if it was the general who was "taking" the boys into the Army, and not the state in accordance with the Constitution.

And then I thought: It would be good if a representative of the local Soviet authority participated in such dialogues. Let him explain to the people the essence of a military obligation and the constitutional duty of each citizen, and not put everything, as happens today, on the shoulders of district staff officers or of the military commissariats.

I am not inclined to think that the comrades in the Council of Ministers are not aware of the negative tendencies that occur during a draft call. However, as I became convinced, they do not possess complete information, and they do not have a great influence on the situation.

I was given an interesting figure in the district headquarters. Last year in Belorussia, there were 40 so-called "refuseniks," and the spring draft call this year had twice as many. What is the Council of Ministers doing so that the increase in service evasion will drop? Has a fundamental evaluation of this phenomenon been made? Alas, it has not.

That the Council of Ministers does not particularly bother itself with the work of the military commissariats is indicated by other facts. For example, by instructions of that very same republic government dated 30 October 1989, the draft center building is being transferred to the Union of Composers, whose representatives have already "occupied" the garage, and who plan to convert the rooms. But where will the officers of the military commissariat work? It is not clear, and no one seems to be troubled by this.

A new draft center is being built on the outskirts of the capital on the basis of a project that meets the highest modern demands. I visited there with the military commander of the republic. The picture, I will say outright, is miserable. There were only several workers here, but even they were not doing any work. Huge cranes and other equipment were standing in lonely silence. In three years, they were barely able to erect just two floors. They throw up their hands in the Council of Ministers; they say that there are no materials and workers. Of course, the republic is living through a difficult time, but why does no one make answerable those who deliver defective goods to the building site and who plunder what is built and received here?

Incidentally, construction has come to a standstill on the oblast draft center in the city of Brest, where what was already done has been falling down for two years. There is no draft center there at all now. They are also in disastrous condition in many of the rayon military commissariats. And it is simply impossible to remove these problems through military efforts alone.

Reserve Officers Still Being Inducted in Critical Specialties

91UM0120B Moscow KRASNAYA ZVEZDA
in Russian 22 Nov 90 First Edition p 4

[Letter from reader and reply: "Does the Army Need 'Two-Year Men?']

[Text] A considerable portion of the regular officers are being discharged due to the partial reduction of the Armed Forces of the USSR. So why is it necessary to draft reserve officers for two or three years?—Sr Lt (Reserve) P. Petrovskiy

Because of the reduction of the Armed Forces of the USSR an extremely limited number of reserve officers are being called up for active military duty. Only officers with specialties in which there is a particular shortage and which are not being trained or are being trained in insufficient numbers are therefore presently being inducted. These include translators, mathematicians, road construction workers, construction workers and certain others.

The "two-year men" are recruited mainly from among officers in the civilian sector who have not served on active duty. Those who have previously served are inducted only with their personal consent.

At the present time the number of "two-year men" in the Armed Forces of the USSR is approximately 2.5-fold smaller than two years ago.

This information was obtained from the Main Personnel Directorate of the USSR Ministry of Defense.

Call To Rethink Foreign Military Assistance Program

91UM0015A Moscow KRASNAYA ZVEZDA in Russian
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[Article by A. Kozyrev: "A Legal Basis for Arms Trade"]

[Text] The Persian Gulf crisis forces us to seriously reexamine Soviet arms agreements made with foreign countries. This may be the first time that exported Soviet weapons have been used in violation of the U.N. Charter. In a speech delivered in Odessa Military District, M.S. Gorbachev stressed that our weapons were also employed in the commission of aggression, weapons that we agreed to sell for the sole purpose of maintaining a defensive posture not for seizing foreign territories and entire sovereign states.

Of cardinal importance here is the fact that the Soviet Union in this case acted in concert with the entire world community at the very initiation of the conflict. We denounced the aggression, took an active role in levying collective sanctions announced by the Security Council, and most importantly, immediately discontinued the supply of arms to the country that had violated the rules of civilized behavior incumbent upon a state. That is, we applied a set of measures that were required to effect a political settlement of the conflict and restore international rights and justice.

Nevertheless, it is clear that our reaction does not preclude reaching other conclusions about this issue. The point here is that the Persian Gulf crisis became a kind of expected surprise, so to speak. With the accumulation of a critical mass of weapons in the area, including highly advanced weapons; with the existing level of distrust and unpredictability on the part of countries located there; with the proliferation of chemical, rocket, and, possibly, nuclear weapons in the Near East, the explosive nature of the situation has been evident to both politicians and the military. That is why there is an acute need for preventive measures that would to a maximum extent reduce the threat of future local conflicts. Instead of an ex post facto imposition of an embargo on military shipments, it is necessary to previously preclude the possibility of employing our—or any—weapons by client nations intent on committing aggression.

A solution lies in judicious control of international shipments of conventional weapons. This problem is difficult and multifaceted, to be sure. It has to do with the inalienable right of countries to self-defense, reducing tensions in various areas of the planet, attaining a qualitatively new level of trust, and strengthening security guarantees on the part of all concerned. The problem must be resolved now.

This is the approach advocated by the Soviet Union in E.A. Shevardnadze's recent letter to the secretary general of the U.N. It offers a number of considered and promising approaches to setting limits on the world's arms trade. The major goal of this document is to initiate a

dialogue on weapons agreement problems involving the U.S. and other suppliers on the one hand, and client countries on the other. The idea here is for all efforts made in this area—be they bilateral, local, or global—to complement each other and be mutually supportive.

Foreign countries have commented that the Soviet Union has in effect offered a program of step-by-step actions that can strengthen international stability via arms trade limitations. The USSR initiatives provide for the following:

- applying the principle of reasonable defense sufficiency to the weapons trade, the goal being to preclude the possibility of offensive potential and set a limit on the spread of the more destabilizing weapons;
- contributing to an environment of nonproliferation of combat missiles and missile technology;
- declaring a prohibition on trade in certain types of conventional area weapons;
- developing local approaches to limitation of the international arms flow, to include procedures aimed at effecting mutual restraint on the part of weapons suppliers and clients with respect to localities associated with conflicts.

It should be understood that the above ideas must be supported for them to "do the job." Encouragement can be drawn in this light from the increasing interest U.N. member countries are showing in the spread of conventional weapons throughout the world. This was discussed actively in recent sessions of the General Assembly, which adopted several resolutions related to this problem. The Soviet Union is participating in a new development, to be carried out under the aegis of the U.N., that would call for full disclosure, to include the compilation of an international registry for weapons sales and deliveries.

Analysis of the practice of developed nations indicates that the countries have developed principles of arms trade that are generally recognized in the world. Thus, a U.S. law authorizes the administration to supply weapons only "for purposes consonant with the principles of the U.N. Charter." This sets limits on sales of "technologically advanced" weapons to developing countries. The President of the U.S. provides Congress with a detailed annual report listing planned arms exports, with individual reports appended to each large contract giving an estimate of the possible effect on a local situation and on arms talks.

Also important is the relationship to possible ramifications of military assistance to a particular country, the effect on local security mechanisms and on agreements that may be in force, especially with respect to nonproliferation of nuclear weapons and creation of nuclear-free zones, absence of aggressive intent, and acknowledgement of inviolability of neighbors' borders. The economic impact of our foreign special shipments should

be made a matter of record. Military assistance is not limited to weapons trade, of course; it is a part of the trade picture. The point here is that defense manufacturing in the USSR is not an inexpensive activity; in the world market there are few cases of weapons being given away cost-free. Once again we can take note of the U.S., where military assistance in effect is clearly isolated from commercial exports, with the President obligated to provide Congress with a quarterly report on the financial aspects of weapons export contracts. Thus, it is legal to make a profit from weapons sales, but there is a requirement to maintain control over military shipments within the framework of the law.

Incidentally, Soviet weapons shipments to foreign countries are not a function of the Ministry of Defense. This

lies within the domain of other departments. All proceeds from the arms trade go into the state budget under the label "unattributed." This is a case where no one organization has a departmental interest. This situation differs from that of, say, Egypt, where a considerable portion of the proceeds earned by exporting weapons produced in that country remains in military hands.

The imposition of limitations on international weapons trade is among the most important of the world's efforts to define a model for security. The Soviet Union's active contribution, made both unilaterally and jointly with other suppliers, is destined to effect eventual strengthening of our defensive posture and enhance stability in world affairs.

Discussion of Relative Success of Conversion

91UM0071A Moscow SOVETSKIY VOIN in Russian
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[Article by Captain 2d Rank A. Gruzkov, candidate of economic sciences: "Grimaces of Conversion"]

[Text] Conversion. This word today ranks in popularity with such concepts as "perestroyka," "glasnost," and "democratization." The hopes and prospects of the country's economic and social development are linked to conversion. Millions of people are counting on its curative effects in the fight with a most dangerous disease—poverty.

It is not the first time the problem of conversion has faced our country. During the years of Soviet power, the state has had to reduce military spending and the numerical strength of the Army and Navy three times.

In analyzing the experience of conversion measures of past years, it seems that today's conversion should avoid old mistakes and prevent the recurrence of critical problems.

Indeed, outwardly everything is proceeding successfully. In January 1989, a 14.2 percent reduction in military spending was announced. In 1990, defense spending will be reduced by another 8.2 percent. Military production is being curtailed considerably. It was reduced by 19.5 percent in 1989. Today, already 345 defense enterprises and about 200 scientific research institutes and design bureaus of the country's defense sectors have become involved in the production of peacetime equipment.

Nevertheless, an analysis of the difficulties cropping up in the process of conversion measures points to the following.

First, neither a concept nor a program of conversion has yet been approved by state bodies. True, planning and executive bodies are discussing the draft of such a program; however, in experts' opinions, it is far from perfection and requires considerable revision.

Second, conversion was announced in a directive manner with attempts to impose on enterprises a products list of consumer goods without special consideration of existing production processes, vocational skills, or experience. Most of the enterprises received the quotas for conversion unexpectedly.

The cancellation of a number of military orders practically without warning placed considerable difficulties before the collectives of enterprises. For example, at the Volga Computer Plant, taking military products out of production left it with 3 million rubles [R] in component parts, which became inconvertible stock. Production equipment with a total cost of R1.5 million came to a standstill in the shops. Half-assembled special equipment worth R700,000 is gathering dust in a finished product warehouse. Total losses come to R5 million.

Conversion was announced during that period when the majority of enterprises of the defense sectors had switched to new methods of economic management and self-financing. Whereas the highest end result is the main thing in achieving military goals, this principle is not appropriate when producing civilian products. Unlike the Ministry of Defense, the ordinary consumer will not be able to buy products that are too expensive. There can be no doubt that the civilian products being produced at military enterprises will be expensive. Let us recall the washing machine with 37 control programs that will not find a consumer not only within our country, but also among "civilized" housewives of the West.

On the whole, one automatically concludes that once again the economic consequences of an important political decision were not considered. The expectation of an effect on the foreign political arena proved to be decisive and more prestigious than the prognosis of economic and social problems and ways to solve them within the state.

How can the resources and production capacities of the defense sectors of industry being released be managed most judiciously? This problem is presently being discussed quite actively. In doing so, the following are named: social security, public health, housing construction, and education. It seems that such a path is the least effective. All the "holes" in our economy cannot be patched up by distributing the funds and resources being released over numerous budget expenditure items.

Apparently, the main effective way is to change the specialization of military enterprises to producing peacetime products that would meet the current level.

However, everything does not look so simple when you begin solving this problem. A number of organizational-technical and social questions immediately arise. One of them is determining the products list and volumes of peacetime products for their location in defense plants, taking into account the specific nature of enterprise.

We also lack a mechanism for transferring the latest production methods and equipment from the defense sector to civilian production.

An important issue that arises during the conversion of defense enterprises is the speed of launching the conversion. Understandably, both trade and the customers expect quick and concrete results. However, one must realize that this process takes time.

Therefore, the desire of many party and soviet bodies to achieve a short-term effect from conversion is incomprehensible. For example, at a meeting of the party and administrative aktiv of Moscow in October last year, it was stated: "The party city committee poses the question in this way: Every enterprise, no matter what it produces—be it combat aircraft or radars—should have specialized production of goods. And its capacity should

ensure that they are produced in such volume as to solve the problem of saturating the market with goods in two to three years."

In addition, a transition to new products always requires considerable cost. Where will we get the money for this? With the lack of a state conversion program, it is suggested that enterprises earn this money themselves. The manager of the Tula plant "Shtamp" notes that they were given only seven of the R47 million needed for retooling. They did not allocate either money or funds for the necessary 138 pieces of equipment. It is obvious that they will not be able to make up the shortage by enthusiasm alone. A reasonable question arises: When and what will the Tula enterprise (and, in principle, not just it alone) be able to give the people with such support?

I would like to call attention to another aspect. No defense sufficiency will be ensured if, getting carried away with production of consumer goods, the pace of developing new models of military equipment slows down. And there is a probability of this happening. After all, it has been proposed to decrease scientific research and experimental design work considerably.

Instead of orienting the aviation industry, for example, toward assisting civil aviation, they are suggesting that a highly skilled collective build automatic machines for cleaning pears and lines for powdered sugar and packaging pastry.

A high level of production automation is required of "defense plants," and it can be ensured. But will the servicing personnel of sectors producing consumer goods be able to work competently and in a highly skilled manner on this equipment? It is hard to be sure of this. After all, serious costs already are being felt today: The created machines are being disassembled and breaking down.

Consumer goods sections at defense enterprises are in a similar situation. It is simply impossible to get a return from some small-capacity section. They do not have the advanced production methods or advanced equipment that are inherent to the main production facilities.

One can cite a typical example. The plant imeni M.V. Frunze Penza Production Association makes bicycles. Despite the fact that they are again in short supply today, for almost a decade now the enterprise's collective has been unable to go past the 1-million mark on its "bicycle assembly line." But it turns out that there is no such assembly line. There are crowded bays where manual labor rules, and there is a lack of elementary good working conditions with high standards of production.

The Armed Forces are another important object of conversion. The economic effect expected from reducing this sphere of military activities has not yet been finally calculated. However, it is expected that the release of 500,000 service members, at least 80 percent of whom may be drawn into the national economy, will create

favorable conditions for an increase in social production. The elimination of many thousands of pieces of various military equipment will make it possible to "beat swords into plowshares," obtain a certain number of tons of steel and aluminum, and use thousands of tons of various types of fuel and lubricants for civil needs.

All this is correct. But I would like to call attention to those aspects of the resolution on which conversion itself depends and as do the prospects of development of our society.

This involves, above all, hundreds of thousands of service members who will be released in the process of reducing the Armed Forces. As a rule, these are cadres of skilled specialists and physically healthy, able-bodied people. Their use with the greatest benefit for society and the least moral and economic loss for the service members being discharged into the reserve makes it necessary today to develop and implement an aggregate of organizational, socioeconomic, and technical measures for personnel retraining. However, an agency has not yet been set up that would be involved in the retraining and job placement of former service members.

Of course, the Ministry of Defense and the State Committee for Labor and Social Problems is doing something in this direction and planning various measures. However, the impression is developing that an officer or warrant officer discharged into the reserve is no longer needed by the Armed Forces and still cannot find his calling in civilian life.

Housing is a most critical problem for those being discharged into the reserve. Whereas there were about 170,000 officer families without "a place of their own" even before the reductions, one can imagine the situation when those being cut enter civilian life. According to estimates, this is another 40,000-45,000 families. Naturally, the Ministry of Defense is not in a position to provide such a number of families with apartments. I am convinced that during the course of reducing the Armed Forces, part of the money must be directed for social security of the service members being discharged into the reserve and retired, and also for raising the standard of living for those who remain in military service.

The country is living through a crisis situation today in almost all spheres of public life: economic, political, ethnic, and others. In such a tense situation do we have to add to the electrified citizenry thousands of people (officers and warrant officers), unsettled, with a disrupted rhythm of life, and with families in their arms. I do not want to appear as a prophet, but you can imagine the consequences if even a small number of this, as we said, trained and well-controlled mass end up under the influence of informal extremist groups. Incidentally, the events in Azerbaijan and Armenia give grounds for such a conclusion.

Finally, one more aspect concerning the reduction in the Armed Forces. Understand me correctly, today's many-million-strong Army is good for the republics of Central

Asia and Kazakhstan. With the shortage of jobs there, the Army and Navy have taken in thousands of young people of the most formative age. Such "job placement" was a saving remedy for our crisis economy, for it is simply impossible to create thousands of jobs instantly. The reductions are in their second year. But nothing is heard about the fact that a program for creating additional jobs in this region is being developed and implemented in connection with the reductions. The events in Fergan, Novyy Uzen, and other places automatically come to mind; young people—unemployed and without a specific place of residence—were the main motivating force...

On the whole, it seems that development and nationwide discussion of a long-term comprehensive program of reducing the Army and Navy is needed that would take into account both the interests of society as a whole and the interests of the various strata of our Armed Forces.

It is important to remember that, given all the importance of conversion as a source of additional resources for our economy, we should not count on it like hide-and-seek. If we carry out conversion skillfully, it will help our economy come out of the crisis to some extent. But the long-term solution to all problems lies in radical economic reform. Without it we simply will "eat away" our military billions.

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Comparing Soviet/U.S. Conversion Experience

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[Article by G. Khromov: "Conversion: Seeking Points of Reference"]

[Text] Representatives from industry, scientists, and public figures from various countries get together more and more often to discuss the ways and means of converting military industries. Just recently ended in Boston was a joint conference with representatives from the military-industrial complexes of the USSR and USA. Its slogan: "Reforge swords into plowshares." Somewhat earlier a UN conference had been held in Moscow on "Conversion: Changes in Economics in the Era of Arms Reduction." An international seminar on a similar subject took place in Leningrad.

The interests of many countries in problems of conversion—and the solving questions related to it is fully understandable notwithstanding the great differences in the scale of carrying out this conversion. Military budgets are decreasing, negotiations on limiting and abolishing arms are being conducted successfully, and armed forces are being reduced. What next?

Among the developed countries of the world, ours is the one that will have to go a long, long way in this endeavor. A relatively larger part of our gross national product went for military purposes than in other countries,

although in absolute size (expressed monetarily) the USA is first in producing arms. At the same time, in taking this route, we must maintain sufficiency in arms and in our armed forces for the country's defense at every stage of this process.

As with any reorientation of industry, conversion is also tied to specific costs, especially at its beginning stage. The burden of assisting the enterprises being converted falls first of all on the government. But an exchange of scientific-methodological and practical experiences, and international cooperation could help decrease these expenditures. A program for international financing of projects for peacetime conversion is under discussion. Our defense (and former defense) plants are increasingly involved in establishing joint enterprises with foreign firms.

One of the most serious problems in conversion, among others, is the social one. After all, we should strive for full employment of workers, their retraining, and maintaining their standard of living. But thus far neither in the USA nor in our country have laws been passed for these purposes. Workers fired from American military enterprises do not have any privileges, and fall into the general category of the unemployed; nor do they receive any government subsidy for their retraining. Today we have a series of governmental decrees, in accordance with which the government has taken upon itself—to a certain degree—to compensate for losses due to conversion. Enterprises that qualify have their economic norms changed, so that the size of expenditures from their material incentive funds will remain the same insofar as possible. The state will also pay for the retraining of workers. It would appear that with a shift to market interrelationships, it is possible that the difficulties of both the enterprises being converted and their workers will increase and that government support will be required in the future as well.

Quite a few foreign scholarly works address the problems of conversion. Our own scholarship, unfortunately, has not produced anything at all in the realm of serious material. Our scholars are trying to justify the lack of their own works by citing the "special closed environment" of our "little defense" complex. Is this true?

At the UN conference in Moscow, mentioned above, a representative of the USSR Academy of Science, A. Izyumov, presented a report entitled "The National Experiment of Conversion in the USSR." Referring to the secrecy surrounding Soviet defense industry data, the author for some reason considered it dishonorable to use information contained in official Soviet sources, including the reports presented by the representatives of the USSR Gosplan and the defense industries at the very same conference. Incidentally, notwithstanding the pretentious title of his presentation, the speaker for some reason distanced himself from his Soviet colleagues and characterized his report as a "purely personal opinion." The USSR Academy of Sciences did not give any opinion at all.

Some of our "analysts" claim, without any serious basis whatsoever, that out there in the West everything is going well in conversion, but at home, it could not be worse. A person could think that other countries do not have to face stark reality, such as a decrease in production when shifting to civilian goods, or that those countries have conversion plans and we do not, etc.

All this is far from being true. The difficulties of conversion are to a great extent similar in all countries. Even taking into consideration the state of crisis of our economy as a whole and the deficiencies in the work of defense industries, there are no grounds for talking about a "conversion crisis" in our country. For the nine months of the current year, defense enterprises have significantly—by 24.7 per cent—increased production of durable goods for national consumption: Television sets, refrigerators, washing machines, and so on. The total of such goods produced amounts to R26.638 million. Unfortunately, the distortions in our economic policy and violations tied to the circulation of money in our country do not allow this growth to be reflected on the shelves of our stores.

Another theory going around, and one which deserves a special evaluation, concerns the "unexceptionally low" profitability of goods made for the civilian market in comparison to the military. A decrease in profitability and an increase in labor costs for each unit of value of civilian goods produced is not identical for defense industries having different profiles. To a very great

degree, negative showings of this type are relevant for machine plants (aircraft, tanks, ships), plants producing gunpowder, and—to a minimal degree—for enterprises connected with radio electronics. With regard to other plants having the same profile, after a certain transitional period, there could even be an increase in labor efficiency for output of modern civilian goods. Data on the main Soviet defense plants, published in 1989 by the International Labor Organization (ILO), and received through official channels, incidentally, from the government of the USSR, confirm this theory. For example, according to the ILO survey, in the Gorky (Nizhegorodskiy) television factory, known as a defense plant, 55.4% of the total labor force produced military goods, whose share comprised only 48.5% of the total volume of production. The rest of the workers of this plant manufactured television sets, the value of which reached 56.5% of the total production value.

Such data explain to a substantial degree why, notwithstanding conversion and all of the present difficulties, it is possible to maintain labor indices of defense complex enterprises at a level that exceeds the mean labor indices in the country's industries as a whole, while other enterprises, for all practical purposes, maintain the same level of production that existed before conversion.

The shift of our economy to market interrelationships will facilitate an even greater optimal selection of alternative output for those defense enterprises which are being converted. And in this the international experience will be of even more value to us.