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TRANSLATIONS ON USSR MILITARY AFFAIRS

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NEW FORM OF MISSILE LAUNCH TEAM COMPETITION VERY SUCCESSFUL

Moscow KRASNAYA ZVEZDA in Russian 2 Nov 76 p 2

[Article by Maj Yu. Letuvnikas, commander of a launching battery: "Competitive Spirit Brought Success"]

[Text] Two teams stand face to face on opposite sides of the launcher at the launch site. The first, led by deputy platoon leader Sr Sgt I. Syatchikhin, is the best in the regiment. It has won prizes at every monthly competition.

The second team, commanded by Sgt M. Shishita, is, so to speak, completely unknown outside the battery. All the members of the team were drafted in May. This is evident from their faces and their bearing. But in terms of the results of combat duty, training, and service the second team is scarcely inferior to the first. How were they able to reach such a high level in so short a time?

At the very beginning of the summer period, as soon as the new soldiers had arrived at the battery, platoon leader Sr Lt P. Yaroshenko came to me with a proposal to compose one team entirely of newcomers, including the commander, who had just been promoted. The senior lieutenant presented the advantages of this plan from the standpoint of more effective training and organizing competition and was very persuasive. He especially stressed the competitive aspect. But this is exactly what caused me the most doubt. What kind of competition could there be, I thought, between Sr Sgt I. Syatchikhin's team and a team just taking its first steps.

But I also knew something more, that Senior Lieutenant Yaroshenko does not do things on impulse; he thinks over every step carefully and discusses it with his sergeants and the best specialists in the platoon. Therefore, I decided to support his proposal. Anyway, the team of novices could be reinforced with more experienced specialists at any time.

After forming the team Yaroshenko drew up a detailed plan which determined what would have to be studied and mastered in practice by what times. It was a high-pressure schedule, well ahead of standards.

The platoon leader talked with Senior Sergeant Syatchikhin and advised him to become the "sponsor" for the novice team, which the sergeant did willingly. At a Komsomol meeting he appealed to his subordinates to take on an obligation to help the new specialists in their combat training.

Even before the meeting PFC V. Bobrovskiy came to the platoon leader and expressed a desire to sponsor the newcomer Pvt V. Grudik. During discussion at the meeting Bobrovskiy announced that he would help his comrade prepare for the tests for a third class rating. Members of the team led by Senior Sergeant Syatchikhin took on similar obligations.

Drills to master the standards began. The new soldiers worked hard, persistently, and harmoniously. They carried one another along and each borrowed know-how from his colleague in the best team.

A check drill was held at the end of each day. The first team would perform the standards first, followed by the second team. In conclusion the launch team members of both groups would discuss the performance of each element, each operation. Of course, the experienced specialists stayed in front, but the gap between them and the novices was steadily reduced. Senior Sergeant Syatchikhin and his subordinates did everything they could to help this process along.

The first team was also competing with a team from the neighboring platoon. This team, led by Sr Sgt V. Lebedev, was a worthy rival. It was always the chief opponent in the monthly competitions for best in the unit. And when these teams met in drills it was interesting to watch their sharp, tense struggle. Most importantly, however, in this situation progressive know-how, procedures, and work methods for launch team members stood out more clearly.

At summer's end a commission from senior headquarters checked the training of our subunits. The team of novices led by Sergeant Shishita performed its standards with an outstanding evaluation. This was a victory for the entire collective of the platoon.

The strictest examination for missile troops is the tactical exercise with field fire. The teams of the launching platoon commanded by Senior Lieutenant Yaroshenko passed it with honor. After a tough struggle the team led by Syatchikhin won the right to load the combat missile which shot down the target. The second team, headed by Sergeant Shishita, received its baptism of fire at the proving grounds and demonstrated a high level of training. Especially outstanding were privates Grudik and Gudyma.

All the officers of the battery and unit are now taking an interested look at the working experience of Senior Lieutenant Yaroshenko and the sergeants of this outstanding platoon.

11,176
CSO: 1801

TRAINING FOR NEW SUBMARINE OFFICERS IMPROVED BY NEW METHOD

Moscow KRASNAYA ZVEZDA in Russian 2 Nov 76 p 2

[Article by Capt-Lt V. Shirokov: "Before Setting Off to Sea"]

[Text] After graduation from school Lt A. Bektayev was assigned to a submarine. Ship service for new officers begins with preparation to take the tests required for authorization to perform duties independently. Bektayev was no exception. During his first days he took on the obligation to receive authorization to control a group and stand bridge watch very quickly.

Instead of the usual few weeks, however, it took him two years to meet his obligation. Why did this happen?

Bektayev arrived on the ship during preventive maintenance work. Some of the officers were on leave. Because of the shortage of manpower the lieutenant was given all kinds of jobs and assigned to assorted details. Then they began going out to sea. Bektayev was actually fulfilling the duties of a group commander without having been properly authorized to do so. The weeks passed, then months, but the young officer himself was in no hurry to take the tests and none of his senior officers encouraged him. The point concerning receiving authorization was always included in the officer's socialist obligations, but it went unfulfilled.

Generally, most school graduates who come to the navy pass the expected tests at the established times, and socialist competition plays an important part in this. But as we see, there are exceptions to the rule. And these exceptions are not always evaluated on principle by ship commanders, party organizations, and staffs.

But this is a matter of molding such qualities of a lieutenant as keeping one's word, precision in meeting the requirements of controlling documents, and command responsibility.

When new officers are slow in joining the regular working ranks there may be difficulties staffing bridge watches and organizing training periods in the specializations. And this inevitably affects the quality of seaman training and how well combat training missions are performed.

On those ships where the commanders understand the importance of a lieutenant's first steps for his entire subsequent service, the new officers are actively assisted in getting on their feet and becoming full-fledged members of the officer collective. Feeling the concern being shown for them, the young people naturally try to be diligent in training and service and fulfill their obligations with honor.

How can elements of chance and spontaneity be avoided in this important work? This question was thoroughly discussed at a work meeting of the staff of the N unit of submarines. Proposals to improve the organization and methodology of training young officers were ratified by the senior officer and put into effect.

What is the substance of the training method introduced in the unit? Its most noteworthy aspect is that the lieutenants prepare for the authorization tests in a strictly planned manner in which the negative influence of "local conditions" existing in the crews of the particular ships is practically eliminated. When school graduates arrive to serve on a ship in the unit the commander orders them temporarily free of details and administrative jobs and they are enrolled in a training group at the unit training center. There they work together to master the full range of questions covered by the system of tests for authorization to control a group and stand bridge watch independently. Of course, the training of the lieutenants in the groups is constantly checked by the commanders of battle units and ships.

A curriculum was drawn up by staff officers for each specialization and methodologies for conducting training periods in shore offices were made out for the training group leaders. In this active use was made of the know-how of leaders in competition and the best officer-specialists, who had been on numerous ocean cruises.

Officers M. Korotkov, V. Il'in, A. Chernykh, and others made a large contribution to setting up the base training program and working out instructions and plans for training periods.

After training periods in the shore offices the submariners continue their training on board ship, reinforcing the knowledge acquired in practical work. The most experienced specialists of the crew give the new men necessary assistance here. The effectiveness of socialist competition among new officers has risen too. A competitive spirit and comparability in the course of training stimulate the lieutenants. In such a situation the struggle to fulfill obligations becomes a matter of honor for each individual.

The training center has everything necessary to introduce the group method of training. The offices are equipped with the machinery and equipment installed on the ship, while the classrooms have the essential methodological aids and instructions, models, and diagrams.

The very first results of group training showed it is highly effective. The commission which administered the examinations found that the novices

had very thorough theoretical knowledge and were able to take care of the actual equipment under their control.

The submarine commanders were satisfied too. One of them told me, "On our ship all the new officers mastered the curriculum and passed the appropriate tests with outstanding marks. Lieutenants M. Kolesnik and A. Smirnov are now operating their equipment very well and working satisfactorily with their subordinates."

After getting positive results in training new officers, the unit staff decided to expand the scope of drills and training periods for submariners in shore offices to cover the whole crew. Formerly certain crews had only appeared there when the ship commander considered it extremely important, for example before a cruise, firing, or a new mission. The classrooms and trainers were often greatly underused.

At the initiative of officer M. Korotkov, the flagship engineer-mechanic, the decision was made to conduct comprehensive training for the crew before training and final missions in the offices. The program worked out for this purpose was tested against ship experience. Centralizing and planning training periods and drills produced positive results here too, not to mention a substantial savings of service life for regular ship equipment.

After completing the cycle of training periods in the precruise training offices submarine crews usually perform final missions outstandingly; the fighting men operate the weapons and equipment skillfully and stand bridge watch vigilantly and confidently during ocean cruises.

The search for ways to improve base training for submariners continues. Headquarters specialists and ship officers are analyzing the experience of the past training year to find new reserves for raising the combat readiness of our crews.

11,176
CSO: 1801

COMMANDER OF OUTSTANDING AIR INTERCEPT REGIMENT EXPLAINS METHODS

Moscow KRASNAYA ZVEZDA in Russian 4 Nov 76 p 2

[Article by Guards Lt Col N. Grigoruk, military pilot 1st class: "Our Main Reserve"]

[Text] I am still impressed by the last flight-tactical exercise of the last training year. It was really a final check of the combat teamwork or our regiment, a serious test for the pilots, engineers, technicians, and mechanics, in other words for all the specialists without exception. Our missile planes were supporting the Ground Forces, striking enemy reserves and installations deep within his defense. The pilots performed their missions under conditions of extremely limited visibility. The clouds hanging low over the field of battle made it difficult to find the skillfully camouflaged, small-sized enemy targets. Nonetheless, our strikes against them from the air were distinguished by high precision in terms of both place and (this is also very important) time.

Many of our officers demonstrated increased combat skill, the ability to evaluate the air situation quickly and correctly, outstanding accuracy with their weapons, courage, and will to victory. But even among the best I would like to single out one: Guards Capt A. Vaskakov, squadron commander. The group of interceptors which he led into battle showed outstanding skill in group flying, arrived at the target region within seconds of the planned time, attacked in a tactically correct manner and delivered a deadly accurate strike. It was not accident that the senior combined arms officer in attendance at the exercise expressed gratitude to the pilots.

The final check showed that we had achieved the goals of improving tactical and fire skill as outlined in the plan and in socialist obligations. The pilots of the regiment mastered all types of combat applications and new methods of action. The high rating qualifications of all aviators were important if not decisive in this. Suffice it to say that every combat aircraft is now flown by a highly rated pilot. All this is the result of the hard, unselfish labor of the unit collective, commanders, political workers, and the party and Komsomol organizations, the result of a comprehensive approach to the technical and moral training of officers, ensigns, sergeants, and soldiers.

The report-election party meeting was held in the regiment the other day. Satisfaction with what has been achieved was expressed in the report by Guards Maj A. Popov, secretary of the party committee, and in the statements by communists, of course. But they said this without self congratulations and self-praise and they gave principled evaluations of all existing shortcomings. The party collective had a business-like discussion on the need to make more vigorous use of the force of socialist competition in technical and moral training of the troops and in unifying the collective. I do not think I will be mistaken to say that our chief reserve is the men, their highly conscious attitude toward military duty and their feeling of personal responsibility for the state of affairs in the regiment.

We have remarkable aviation equipment. But the paramount thing in the work of every communist in the unit should always be the human being with his strong and weak points, his merits and shortcomings. This was our starting principle in organizational work to mobilize all the forces of the collective to accomplish the chief missions of continuing to raise combat readiness. This is painstaking work which requires an individual approach to literally every serviceman.

I remember how Guards Sr Lt A. Ivlev developed into an outstanding officer. After becoming a military pilot 3rd class he suddenly lost confidence in his ability to make second class. Flight training was hard for him and he often made mistakes in piloting technique, especially in landing. The young officer suffered terribly with each failure. My deputy Guards Maj V. Zotov and the flight and squadron commanders carefully studied the character of the young pilot's errors, determined their causes, and made a detailed review of the flight elements which gave him the most trouble. Then, after a good talk with Guards Lieutenant Ivlev, the squadron commander laid out a program of individual training for his subordinate. At the same time he explained that the success of flight training would depend on painstaking work not only by the flight instructor alone but also by party activists. The development of this young officer was difficult. He was forced to taste the bitterness of failure many times. But the communists and his senior comrades believed in the pilot's abilities and worked hard for him.

Patient, purposeful individual work with the lieutenant bore fruit. He regained confidence in his own abilities and caught up in training. The officer completely fulfilled his personal socialist obligations by passing the examination for the title of military pilot 1st class. Guards Senior Lieutenant Ivlev is now rightly numbered among the masters of combat application.

Here is a different kind of example, where strong steps were needed. The flight commanded by Guards Sr Lt V. Uralov was justly considered one of the best in the regiment. But once Uralov's subordinates surprised many people with mediocre results in firing at ground targets. Guards Lt A. Ploskonov even made a dangerous mistake during work at the range. It did not have serious consequences, of course, and some were inclined to view it as an accident. But to the commander of the squadron, the staff,

and the party committee of the unit it was an alarm signal: standards in training officers for flying had been weakened in the flight. A review of the state of affairs in the flight was begun, and not from the day when the shortcomings in training pilots were revealed but rather back in the "good" period.

It turned out that officer Uralov already showed a tendency to lower his standards with respect to subordinates at that time and, as a result, the results of the aviators of the flight in combat training had been gradually dropping. The flight commander was called to account strictly, in a party manner, for slackening checks on the flight readiness of his subordinates; they helped him set up methodologically correct preflight training sessions. Senior comrades talked at length with each pilot and devoted special attention to raising the level of training of the young aviators, including Guards Lieutenant Ploskonos. They helped the pilots draw up personal plans for independent training and establish concrete assignments for each day. This was necessary to get the flight back into combat shape in a short time. To the credit of the collective, we must tell that the unit quickly regained its fame as one of the leaders.

It is not accidental that I have given so much attention to these two examples. They give a particularly graphic picture of the system of working with the men which has become established in the practices of our commanders, political workers, and party activists. In talking about this I do not claim to have made any discoveries. It is a matter of something else -- strict consistency, persistence, and purposefulness in individual work. Each officer involved in the technical and moral training of subordinates is familiar with basic pedagogical principles, effective methods, and the necessary information from military psychology. But success comes only to the one who, while following these principles, never slackens his attention to any subordinate whether he is an officer and pilot or a soldier mechanic. And the comprehensive approach to solving concrete questions of troops education is also essential in individual work.

In this connection I would like to mention the educational role of the example of leaders in competition and the necessity of giving broad publicity to their work procedures and methods on modern aircraft. A methods council which studies, summarizes, and disseminates the know-how of the best at the proper time is a great help to commanders and political workers in this. At one time, for example, Guards Sr Lt Yu. Bedrov was able to become a master of target interception in the most complex air situation. This did not escape the methods council. Bedrov's experience was carefully studied. Precise recommendations were worked out on this basis and following them commanders began to teach flight personnel one of the most reliable methods of intercepting in a tactically unfavorable situation which may occur in battle. Then at exercises our pilots showed that no unexpected inputs could upset them.

This also had another effect. The men saw how searching for new things was encouraged, how those who were always searching creatively and working toward raising the combat readiness of their regiment were praised. Now,

inspired by the example of the leaders, the fighting men are literally showing selflessness in military labor.

The regiment has gone for a long time without a flight accident or serious potential cause of one. Considerable credit for this goes to the fighting men of the aviation engineer service. They make it a matter of conscience, as the saying goes, to prepare planes well for flights and to perform scheduled maintenance correctly and at the right time. They do a great deal to improve work methods and their laboratory equipment. They have introduced more than 40 efficiency proposals which have had great practical value.

Let me just mention the trainer devised by Guards Sr Lts. Tech Serv V. Shvayger and Yu. Kul'gayev. Using it a pilot on the ground can improve his skills in searching for an aerial enemy and drawing within missile range of him. A mobile unit developed by a group of specialists under the direction of Guards Capt Tech Serv A. Kozlov has also won recognition from the aviators. Its introduction markedly improved the quality of scheduled maintenance work under field conditions. The list of similar creative innovations and finds by our specialists could be extended.

A great deal has been done, and the collective is justly proud of its achievements. But we also have unresolved problems, and they were discussed forthrightly at the report-election party meeting. The training work of some flight commanders still leaves much to be desired. We are concerned about the regiment's technical maintenance unit. It was outstanding for five years in a row but then it fell back.

We all have things to work hard on in the coming training year. One of our important missions is to further improve the management of socialist competition and strengthen the role it plays in technical and moral training of the fighting men.

The name of Hero of the Soviet Union Sr Lt N. Glazov has been entered permanently on the roll of the first squadron. In training battles in supersonic planes the pilot-engineers compete for the right to enter their outstanding results in a specially instituted flight log named after the Hero. Guards Capt G. Torbov, Guards Sr Lt V. Uralov, and other officers have earned this lofty honor. Our aviators are determined to continue this vital chronicle of combat glory in the new training year.

11,176
CSO: 1801

WAYS TO EFFECTIVE PARTY POLITICAL WORK DISCUSSED

Moscow KRASNAYA ZVEZDA in Russian 5 Nov 76 p 2

[Article by Col Ye. Pal'tsev, chief of the division of party organizational work of the political directorate of the Group of Soviet Forces in Germany: "Unity of Word and Deed -- Discussion of the Letter Entitled 'Party Influence: How Can It Be Made More Effective?'"]

[Text] The letter by Guards Capt V. Ul'yanov, secretary of a party organization, raised important problems which concern more than just young party activists. In many party committees and political agencies they are the subject of thoughts leading to continuous improvement of the forms and methods of party work and a search for reliable ways to make it more effective and influence the life and training of the troops. Such effectiveness is achieved only where the party organization strives to insure an organic unity of word and deed, between the form and the content of its work.

At the political directorate we recently had a talk with Capt V. Bystrov, secretary of a party organization. He told in detail how the organization conducts meetings, sessions of the bureau, and other activities regularly. He said the party organization was keeping an eye on training progress and combatting all traces of formalism in the management of competition. In connection with this, he said, they had adopted many good decisions.

The external impression was created that comrade Bystrov's party organization was in the center of all events happening in the unit and aware of the true state of affairs in the local areas. But this was just the exterior. Carried away by the formal side of things, party activists had forgotten about actual organizational work in the local areas and thus they did not have a good knowledge of the real state of affairs in the collective. This led them to make the following mistake: for a long time they appealed to the troops to measure themselves against a certain company which was supposed to be the best, but in fact it was behind the others.

One cannot help asking -- how is that for a bureaucratic approach to competition? What good are all the inspiring words at meetings and sessions of the bureau if they do not reflect the true state of affairs and are not backed up by actual, concrete organizational work? There is no need to prove that such a formalistic approach greatly reduces the effectiveness of party work and diminishes the prestige of the party organization.

How could such a thing have happened? After all, the leaders of the party organization assured us that they "waged a tireless struggle against manifestations of formalism." The trouble, it appears, is that the struggle was waged on paper more than in fact. Until a certain time the bureau and party activists had only a dim idea of how competition in the subunits was really going, and this made it difficult to see that specialists received a high level of combat training. And without a knowledge of all this, how could they exert a real influence on events and change the situation for the better through party action?

It has been remarked that such "infatuation" with the number of activities is characteristic of some new secretaries when they are just learning the intricacies of their hard, complex work. Such activities are often held although they are unrelated to the unresolved questions facing the collective. This is the same kind of formalism which gives rise to tolerance of poor training periods and indulgence and simplification in the process of technical and moral training.

It was an unusual case and, needless to say, all the necessary steps were taken. It is to the credit of the leaders of the party organization that they learned a lesson and abruptly changed their style of work. This soon had a beneficial effect on the state of affairs in the unit. One may then ask: why did we recall this case? It was to show the paradoxes which can result from a gap between word and deed, between the form and the content of the work of a party organization.

The discussion now underway in KRASNAYA ZVEZDA is touching on various aspects of the work of party organizations. Guards Capt V. Ul'yanov writes that party influence and its effectiveness are composed of many parts. That is true. And nothing is unimportant in this. In this connection it is worth our attention to look at practices in preparing for and conducting sessions of party committees and bureaus and party meetings in terms of the political educational value for communists. An important factor in success here is the ability to correctly formulate the issue for discussion by the communists and to find the most advisable forms of influence by the party collective on particular work sectors.

I recall the following instance. Problems were revealed in the organization of guard and administrative duties in one of the units. The trouble was in large part the result of poor work by a communist, the deputy chief of staff. The unit party bureau decided to help the commander put the service in order strictly according to regulations. But how? Without a study of the matter the comrade immediately brought the question out for discussion. And they assigned the above-mentioned deputy chief of staff to give the report.

This produced a situation that was strange to say the least: the man who was at fault for the problems spent 20 minutes telling the members of the bureau what should be done to improve the service and how to do it. In a way everything was upside down and, naturally, this discussion did little good.

Why hide the fact that by no means all leaders of party organizations have the ability to formulate current issues for discussion. That is why some meetings and sessions are ineffective. We must also admit that they are sometimes held just to make some kind of response to trouble which has been uncovered, to avoid the charge that the party organization has been inactive.

I want to emphasize again here that party work is real work with the men. And as Maj S. Sereda very correctly said in his reply to comrade Ul'yanov's letter, this work does not tolerate superficiality or a formalistic approach. Party work to influence people involves primarily actions directed to the moral training of communists, increasing their responsibility for performance of their party and service duty, and bolstering organizational and moral training work with non-party personnel. There is no need at all for the party organization to take on administrative functions which are out of its line, but this sometimes occurs in practice. The party should use its inherent means of political influence to enhance the organizational role of the orders of commanders and chiefs and actively influence the activity of military collectives.

Certain young party workers are sometimes inclined to understand the effectiveness of party influence in a simplified way. Some of them think that if an issue is just discussed at a meeting things will straighten out. They want to see results right away.

Like any other work involving moral training of people, party work demands patience, a strict system, purposefulness, and consistency. The more deeply party work goes into the life and combat training activity of the military collective and more substantiated decisions on pressing issues are, the better results will be and the greater the effectiveness of party influence will be. It is not the mere appeal nor the brief flurry of activity that characterizes the best party organizations in our group of forces; it is steady, painstaking organizational and educational work whose fervor is constantly growing.

Let us talk about the party organization where Maj V. Listus is secretary. It is a real combat collective whose activity is distinguished by precision and purposefulness. They devote a great deal of attention to improving the professional skills of communist officers. The activities that the party organization conducts to assist the commander always aim to develop the creative approach to work in the officers, to improve their command skills and methodological abilities, the effectiveness of teaching methods and demonstration training periods, short tactical exercises, and fire and technical conferences. In such a situation the best practical qualities of a communist are molded fast and reliably and the reputation of the communist grows noticeably. This organization is truly concerned to see that each communist, as comrade L. I. Brezhnev stressed at the October 1976 Plenum of the CPSU Central Committee, "sets an example of smartness and discipline and the creative approach to work, an example of the state approach to solving large and small problems."

We try to give this style of work by party organizations all possible support. The political directorate has already done a great deal to disseminate the know-how of the best party collectives broadly. But we understand perfectly that our efforts and searching in this important area must be constantly increased. This is especially true when processes are taking place in the internal life of party organizations that will directly affect the effectiveness of all party work. The party organizations of our group of forces grow younger each year. This and other processes place before us a series of new questions, particularly with respect to the ideological toughening of new communists, instilling them with lofty party qualities, and drawing them into active participation in the life and work of the party collective, in the struggle to improve the effectiveness of party influence.

11,176
CSO: 1801

RESOLVING DISCIPLINARY PROBLEMS AT REMOTE MISSILE SITE

Moscow KRASNAYA ZVEZDA in Russian 10 Nov 76 p 2

[Article by Col A. Sinev: "Rocks in the Road"]

[Text] When Officer P.S. Znak set out for a remote "point" to take over a subunit, the unit (chast) commander told him:

"We are assigning you to a difficult job. Combat training indicators there are stable, improving at times and deteriorating at others. There are also violations of discipline. Try to find out the main cause of the problem."

The task proved to be a difficult one. The former commander, a major, had a ready answer for every question: everything is in order. And discipline violations "have been with us from antiquity." Steps have long since been taken, and is it worth going over them?

And then suddenly, when the transfer was almost completed, the major received a report on a gross violation by two soldiers who were absent without leave and drinking. He frowned and pounded the table angrily. After sending the guilty soldiers to sleep it off he said to his successor in a subdued voice:

"Our unit commander is very strict. There will certainly be a blemish on my record. Would it not be better to hush up this matter"?

Petr Serafimovich shook his head resolutely:

"You can't conceal something like this. And why should you try? No, I will not go for this, and I do not advise you to do so."

As he inspected the equipment the next morning Znak detected dents painted over with fresh paint on the hood of one of the vehicles. He questioned the men, and yet another unpleasant story came to light. It turned out that the vehicle had recently overturned into a ditch as a result of violation of driving regulations. The driver had escaped with slight bruises and the vehicle had been repaired. No one had investigated the cause of the accident,

however, and headquarters had not received a report. The whole incident had been concealed.

A party meeting was soon held in the subunit. The communists' tasks with respect to strengthening military order were discussed. A report was made by Petr Serafimovich Znak. His words reflected all of his passionate intolerance for discipline violations which, like rocks in the road, were hindering progress. The pointed and substantial report inspired the communists. They sternly rebuked those involved to one degree or another in the concealment of the true situation.

"I frankly admit that I am also greatly at fault," said Captain O. Bogatyrev, secretary of the party organization. "I sometimes compromised. There will be no more of this."

The new commander found the communists to be zealous assistants in the work of strengthening and maintaining regulation order. They talked to each crew on the requirements set by military regulations and criticized existing deviations from regulation order in a spirit of party-mindedness.

Thus began a drastic change in the life of the military collective at the remote "point."

During an intensive training session involving the repelling of an "enemy" air raid I noticed a vigorous soldier skillfully performing his duties.

"Private 1st Class Mikhail Yanzinev, specialist 1st class, is one of our best soldiers," Znak said of him.

"It is a pity that he will soon be transferred to the reserve. He is training a worthy replacement for himself, however."

Following a short silence the officer added:

"I had to work very hard with him, however..."

Around two years ago Yanzinev had arrived at the "point" with a great many poor habits. Prior to this he had worked in the lumber industry and had fallen in with a group of boozers. He had gone astray in his service, as they say, from the very first.

"He is getting out of hand and dragging the entire subunit down," the First Sergeant once said to the subunit commander. "When we get the chance could we not assign him to administrative work?"

"Out of sight, out of mind?" the officer chuckled. "No, I will not agree to that. The soldier does have some good qualities. You yourself have said that when he sets his mind he does an admirable job."

Yanzinev had arrived at the "point" together with fellow countrymen from the Komi ASSR, Sergey Voinov and Anatoliy Poleshchuk, real workers, disciplined and industrious. The commander advised them to get closer to Yanzinev and become friends with him.

After that the three soldiers were frequently seen together, during independent training and the athletic grounds. Yanzinev perked up. His new friends prodded him whenever he stumbled. In time Yanzinev came to realize the situation and began applying himself to the training. He excelled in the regular firing exercises, and the commander rewarded him.

There is no denying the fact that a subordinate's offense, especially an accident, causes the one-man commander a great deal of concern and trouble. What is he to do, however? When something like this happens, look it in the eyes, and analyze the causes and take resolute steps. And naturally, rely on public opinion, on the collective. Let their comrades condemn the undisciplined ones, and let him who is inclined to commit violations take note. The majority of commanders do just this. Not all of them, however. Some of them do not hasten to clean their houses. They raise a great fuss in their office and warn the guilty party to his face, and that is the end of it. They then breathe a sigh of relief: it appears that the trouble is over.

And perhaps the dark cloud will in fact pass over and the incident be forgotten in time. But what damage the shortsighted commander does to his prestige and to the job of indoctrinating the men. His words lose their ability to persuade and frequently sort of hang in the air. And then like as not a storm cloud replaces that which has disappeared on the horizon.

Naturally, in order to combat violations of military order the commander must be demanding of himself, irreproachably disciplined and morally pure. It has been noted that as a rule the commander who indulges himself is encouraging his men to do the same.

This is approximately what happened at first with Lieutenant A. Rozhdenkin. It is true that Petr Serafimovich noticed with satisfaction that the young officer possessed solid military skills and was in love with the complex equipment. The trouble was that there was something to be desired with respect to discipline. He would now be late for duty, now arrive at work smelling of alcohol. He thought little of lighting up a cigarette in front of the formation. And the lieutenant looked the other way when his men committed violations, frequently hushing them up. Fortunately, he came under the strong control of the commander. Znak did not ignore a single violation. He talked with the lieutenant and punished him. And when the lieutenant again committed a gross violation, taking a military vehicle without permission and driving to a nearby settlement, he was held accountable at an officers' meeting. He continued to go his own way, however, behaving in a haughty and arrogant manner.

One day the subunit commander received a call from headquarters: Rozhdenkin's father, a veteran of the last war, had arrived to visit his son. The voice over the telephone fell silent and then continued in a quieter tone: there is probably no need to tell the father about his son's unseemly conduct.

Znak promised to think about this and felt that he was at an impasse: he did not want to disappoint the father at all, but he could not find it in himself to tell a lie.

The situation did not prove to be so difficult. The father himself asked the commander to tell the entire truth. He later had a long talk with his son, face to face. No one knows just what the conversation was all about. After that, however, Aleksandr changed his behavior drastically and became demanding of himself, neat and precise. He became noticeably more demanding of his men as well. He carefully adopted the know-how of the officers with the best methods, masters of training and indoctrination. In time his platoon joined the ranks of the excellent. Not long ago the lieutenant received a promotion. The firing battery which he commands received highest marks in the last firing exercises.

I visited the combat glory room with the tall, solidly built Znak. Photographs of veterans of past wars, documents attesting to their feats and time yellowed letters from the front to families and friends have been carefully gathered there. And alongside these relics, dear to the heart, as though exchanging greetings with them, are displays depicting the day-to-day work of the heirs of the front-line soldiers - duralumin targets with torn edges, destroyed by the missilemen in field firing exercises in recent years. At the extreme right a metallic sheet contains fresh dents and notches.

"Knocked down with the first missile," explained Petr Serafimovich not without pride.

One inspects with interest the piece of metal which recently fell from an enormous height above the clouds onto the grounds of the firing range, and automatically thinks of the men, the masters of that awesome equipment. They needed only a matter of seconds to smash to bits a target travelling at supersonic speed. How many tense training sessions of many hours did those seconds represent, however, how much human effort?! And there is absolutely no question that one of the main components of the new success was a high level of organization, firm and aware discipline on the part of the personnel. After all, the rocks had long been removed from the road at the "point," figuratively speaking, and gross violations of military order eliminated there. Does this incident not speak for itself?

11499
CSO: 1801

TRAINING RESULTS ABOARD ASW SHIP

Moscow KRASNAYA ZVEZDA in Russian 10 Nov 76 p 2

[Article by Capt 2d Rank V. Shepelev, commander of the large ASW ship Ochakov: "Effectiveness of the Search"]

[Text] The large ASW ship Ochakov was operating as part of a hunter-killer group in the concluding exercise.

Both the tactical situation and weather conditions were extremely difficult. A cold fall wind was whipping up fairly strong waves. The ship began to pitch. Hypothetical problems were introduced one after the other. An officer from superior headquarters, an experienced tactician, was on board the ship. Looking at the stern, concentrated look on his face I could not help thinking about the fact that this was not the first time our crew had been put through a very strict test this year. Commander in Chief of the Navy, Admiral of the Fleet of the Soviet Union S. Gorshkov, had sailed on the Ochakov to the Mediterranean Sea in the summer. He had analyzed the sailors' actions in a training battle in the most demanding manner and had demanded that they put great effort into their work.

The stress this year: effectiveness, quality - at the top of the list. And as they evaluated our work the senior chiefs had invariably impelled us to seek hidden reserves, not to stop at what we had achieved, to measure our training with the yardstick of battle.

The search for the "enemy" submarine began. All elements of the ship's complex organization went into action. Finally there was the first report on contact with the submarine. It seemed as though a heavy weight had been lifted from our shoulders. The "enemy" was not dozing, however. Making skillful use of depth maneuvering he was able to break away before the helicopter took to the air from the ship's deck. The submarine did not manage to go far, however. This is where the training of our sonar men, headed by Senior Lieutenant V. Pavlov was demonstrated. Under the most difficult conditions the Ochakov re-established contact with the target and reliably maintained it for many hours.

The norms for target indication were bettered. Within a matter of seconds following the command Captain Lieutenant S. Bykov's men were employing the anti-submarine weapons. This would have meant victory in a real battle.

Sailors who had joined the ship relatively recently or had been assigned to new posts excelled in the exercise along with the experienced specialists. Young officers V. Kostin, A. Mikhaylovskiy and A. Zenzerov proved themselves to be tactically mature anti-submarine fighters. It turned out that the experience acquired on the cruises had already been assimilated by the youth. This means that we have a reliable foundation for moving ahead.

As I recall that difficult search for the "enemy" submarine in the training battle I cannot help thinking that to a certain degree the entire past year has been one of search for our crew. After all, we had entered the training year with the title of excellent ship. It is one thing to move from a "three" to a "four," and another to surpass levels already acknowledged as standards. We had to overcome the "inertia of success," to change the psychological frame of mind, to convince the men of the existence of reserves, to reveal these and put them to use to improve the ship's combat readiness. The party and Komsomol organizations had a great deal to do with this.

None of us, for example, would soon forget the return from Moscow of Senior Lieutenant S. Velikodvorskiy, secretary of the party bureau, from the 25th CPSU Congress, his talks to the sailors and his accounts of the Congress. He made the party's instructions on effectiveness and quality of work a concrete part of our jobs. Delving into the course of the crew's training and service the party organization concentrated attention on supporting the missile, torpedo and anti-submarine training of the sailors.

All of this, however, is the usual work, so to speak. It is another matter to find a new, leading element, new impetus for increasing the enthusiasm of those competing.

There were many rated specialists on the ship, for example. There were only individual masters of military affairs, however. A disproportion? Without a doubt. Were there reserves? Obviously. Following the 25th CPSU Congress we decided to focus the patriotic movement of those competing more directly on the development of specialists with the highest rating. We weighed the facts to determine who was worthy of becoming a candidate for the rating of master with respect to skills level, length of service, morale and combat qualities. We organized a group and made it official with an order. Each individual committing himself to become a master compiled a personal training plan.

"In my opinion we have not done enough," said Engineer-Captain Lieutenant P. Sabodash, master of military affairs. "As a guarantee we must see that each officer or warrant officer (michman) with the title of master assume sponsorship of at least one candidate. As for myself, I commit myself to helping senior lieutenants Narozhnykh and Pavlov."

Warrant Officer V. Bukhal, the ship's best missileman, was first to follow Sabodash's example. New entries were made in the personal commitments of other masters as well.

When we totalled up the results we made note of the results achieved by the fighting men and indicated for ourselves the difficult goal of providing them with whatever assistance they required. Additional training sessions were conducted and strict demands were made of those who were being less demanding of themselves and were working at less than full capacity. And the number of masters on the ship, mainly leading specialists, doubled.

A military-technical propaganda council was created on the ship to raise the technical level of the sailors. It included many activists: after all, almost all of our officers have a military engineer's diploma. The council headed by Captain Lieutenant Ye. Meshcheryakov coordinated the work of technical groups in the different specialties and organized conferences and quizzes, meetings with masters of military affairs, and competitive reviews. The same council was involved in developing plans for rationalization work.

This year, incidentally, our innovators' search focused more purposefully on the improvement of the ship's combat readiness. (After all, it is no secret that the technical creativity of the fighting men sometimes develops in a secondary direction and that not every accomplishment, no matter how fine, can be considered rationalization). Our skillful rationalizers were given concrete assignments and began developing devices essential to the combat work. For example, Warrant Officer V. Glukhmanyuk prepared a simulator which permitted the missilemen to reduce the time spent receiving target indicators considerably.

The group of ship specialists, including our experienced engineers, developed the concept for a device which would improve the receipt and depiction of combat information at the main command post while searching for and attacking underwater targets. The idea received support in the proper section at fleet headquarters. Computations were also made there for the most complex element of the design. The instrument is now in operation and is considerably accelerating the development of the battle decision.

Yes, we have managed to use a certain portion of hidden reserves for improving combat readiness with adequate effectiveness. We have not yet done everything possible, however, and we cannot be satisfied with what we have achieved.

Unfortunately, the crew did not perform some tasks to the best of its ability. The primary cause lies in the fact that we did not conduct all training sessions in a complex tactical situation. Individual ship subunits have still not established a total atmosphere of systematic and constant demandingness in the daily work or a comprehensive approach to the accomplishment of all tasks of training, indoctrination, competition and party-political work.

During the difficult days of the cruise, for example, when the crew was performing firing exercises and searching for an underwater "enemy" no serious complaints could be levelled against sailors in the communications division headed by Captain Lieutenant G. Kovalev. The men put forth great effort. During ordinary times, however, especially when the ship was anchored at the base, sailors of the BCh-4 [observation and communication division] relaxed their efforts perceptibly and received complaints about the maintenance and use of equipment. These deficiencies were not always taken into account when training and competition results were totalled up. The training sessions were sometimes simplified.

We recently conducted a comprehensive check of the division. The results were discussed at a subunit party meeting, which was addressed by Captain 3d Rank N. Kulikov, deputy ship commander for political affairs. A report by communist G. Kovalev was heard at a session of the ship's party bureau. It is felt that the commander and all sailors of the observation and communication division will attempt to improve themselves to the level of our best divisions.

We have set the same guideline for the electrical and engineering division (BCh-5). It should be noted that the specialists in that division stand watch well and competently support the sailing and maneuvering of the ship, day and night, at the base and at sea, frequently in extremely difficult, stormy conditions. An analysis of the year's work, however, showed that they received more "fours" than "fives." This means that hidden reserves are being utilized cautiously. Take damage control, for example. The crew as a whole received only excellent evaluations in checks conducted in difficult conditions with actual flooding and simulation of fires. The damage control subunit, however, which should naturally set the standard in this work, received criticism. This was directly the fault of its commander, Engineer-Captain Lieutenant V. Korov-nichenko.

It is essential for us to improve the moral-political and psychological conditioning of each sailor. We were compelled to devote special attention to this by an error made by Petty Officer 2d Class A. Krishchenko. It occurred during practice firing. I had no doubt as to the success of Senior Lieutenant Yu. Remchukov's men. They were to be the first to repel the "enemy" attack. The firing revealed a different situation, however. It turned out that Petty Officer 2d Class Krishchenko had been a second or two late with his report.

After this, we decided to conduct training sessions more frequently, to make the situation as close to actual combat as possible and to simulate complicated equipment breakdowns. In the last firing exercises Petty Officer 2d Class Krishchenko received an excellent evaluation. We must not forget his previous error, however: new sailors, warrant officers and officers are joining the ship. This means that we must make the training sessions more difficult and combat routine even more persistently.

In the new training year the crew of the Ochakov will again have to stand the test of long cruises and to accomplish new and even more difficult missions. We have reserves for improving combat readiness. And we will attempt to utilize them.

MISSILE UNIT TRAINING RESULTS

Moscow KRASNAYA ZVEZDA in Russian 11 Nov 76 p 2

[Article by Maj V. Pimenov: "Regular 'Fortuities'"]

[Text] All of us who have served for any length of time in air defense units (chasti) are familiar with the atmosphere which builds up in the missile collectives prior to leaving for the firing range. We are familiar with that period of work, intensified to the maximum degree, when each hour, no, each minute, is used for practice sessions, classes and more practice.

Precisely such an atmosphere with the tension of the front line reigned at the beginning of the training year in the subunit commanded by Major S. Bagdasaryan. Only when it was literally a matter of minutes before time to leave for the firing range that Major Bagdasaryan breathed a sigh of relief: everything necessary had been done to receive a high rating. Now the only thing required of him and his men was to confirm the encouraging results obtained during the check firings with precision launchings at the firing range.

The missilemen's hopes were frustrated at the firing range, however. And it happened at the most crucial moment, when they appeared to be only seconds away from the cherished "five." It was precisely at that moment that Lieutenant I. Karpenko's subordinate, Junior Sergeant V. Lovitskiy, committed a blunder. He engaged a different tumbler switch than the one specified in the instructions. This was naturally followed by an extension of the young specialist's negligence on the part of the system technician, who did not detect the error in time. The delay in their actions affected the entire crew. As a result, although the subunit fulfilled the task, it's evaluation was lower than it had counted on.

Incidentally, the collective seemed to rapidly forget about what had occurred in the compartment during the firing practice. Several months later, when one of the officers from the unit headquarters expressed the idea that the cause of the failure at the firing range should be carefully studied after all, Major Bagdasaryan was genuinely surprised: why bother? Everything was absolutely clear, after all: a chance occurrence had let them down. The same sort of occurrence which is always an unfortunate exception to the rules.

But let us return to the days preceding the departure to the firing range. There is no denying the fact that Major Bagdasaryan and all of the missilemen exerted a great deal of effort. While they did not actually work from sunup to sundown they at least remained at their positions until late in the evening. In other circumstances such selflessness could only be welcomed. We shall refrain from compliments in this case, however. It is better that we should ask ourselves what necessitated such an expenditure of time and effort?

The explanation was quite simple, it was later determined. It turned out that the decision had been made in the subunit to utilize preparations for the firing practice to eliminate all deficiencies in the specialists' training at the same time. Considering the limited amount of time this task was naturally beyond their capability. This is especially true in view of the fact that there were many deficiencies and that they had not accumulated in a single day, by far. For example, planned classes in the subunit were postponed and sometimes disrupted altogether, without valid reasons. Because of poor training in methods on the part of individual officers, including Lieutenant Karpenko with whom we have already become acquainted, the specialists' training was not always carried out on the proper level.

The chain always breaks at the weakest link. The error committed by Lieutenant Karpenko's subordinate was "planned," so to speak, by the entire irregular course of the training process, by the low level of the classes. Incidentally, the same conclusion was reached by Major Bagdasaryan himself, who finally analyzed the lessons from the firing range with his assistants.

We would point out in all fairness that the steps taken in the subunit to eliminate the deficiencies revealed were characterized by concreteness and purposefulness. Having become convinced from his own experience that unpleasant "fortuities" in the combat work are not at all fortuitous, the commander set out resolutely to improve the quality of classes and practice sessions. And this is without a doubt partly responsible for the fact that the subunit completed the training year as a whole with fair results. Naturally, however, it was not possible to completely make up for what had been committed. The missilemen had to give up the title of excellent subunit.

The ability to derive the proper conclusions from a single incident or from several incidents, to detect the emergence of a definite pattern in a single incident - therein lies the real art of the commander, so to speak. In this connection I recall a tactical exercise which took place in the subunit still commanded by Officer M. Pritula. It was conducted soon after the missilemen had returned from the firing range. Officer Pritula's men had demonstrated irreproachable skill during the course of the target practice.

It would appear that the tactical exercise would pose no special difficulty for the missilemen after their trials at the firing range. And this, strictly speaking, was the case. There were incidents, however. To their crewmates' surprise two of the operators, Private 1st Class K. Leont'yev and Private I. Nefedov, who had made a good showing at the firing range, did not perform their duties in the best possible manner by far during the exercise.

In the general situation of successful actions by all of the crews the minor errors committed by the two operators might have remained undetected or at least not have drawn the commander's attention. Pritula's reaction to the incident was extremely sharp, however.

And this was no surprise at all, naturally. Officer Pritula, an experienced commander, had more than once become convinced of the fact that success in the use of missiles depends on the coordinated actions of all the specialists, without exception. And perhaps the two soldiers' errors had not caused any special trouble in this one exercise. In another situation, however, when the missions to be performed would not be prefaced with the word "training" the same error could result in extremely serious consequences. This is why the commander decided to carefully study the causes of the lack of confidence in the work of Private 1st Class Leont'yev and Private Nefedov.

Typically, the more carefully the lieutenant colonel analyzed the operator's errors the more obvious it became that the breakdown in their work did not occur by chance.

It sometimes happens, after all, that an excellent evaluation received in target practice gives rise to the so-called "post-firing range disease." It is characterized by an atmosphere of complacency and placidity. Officer Pritula saw the symptoms of precisely this disease in the incident occurring during the tactical exercise.

A party meeting was soon held in the subunit. It dealt with the subject: "On Raising the Communists' Personal Responsibility in the Struggle Against Cases of Lack of Principle, Complacency and Self-Praise." The commander made a report. He set the proper tone for the meeting. The communists speaking after the commander talked about the quality of training sessions and exercises.

"They are frequently organized hastily," said Captain V. Grigoryan. "Now, it turns out, the interference simulator is not tuned, now some other piece of equipment is not operating. As a result the training session has been held, but without the proper effectiveness."

The commander and party organization took effective measures to eliminate the deficiencies. The personnel subsequently strove to totally fulfill their commitments in the competition, achieved new successes and, based on the results of the training year, retained the title of excellent collective.

11499
CSO: 1801

TRAINING OF NEW MISSILE UNIT PERSONNEL

Moscow KRASNAYA ZVEZDA in Russian 12 Nov 76 p 2

[Article by Sr Lt O. Balakin, interception controller: "The Targets Are Being Jammed"]

[Text] I have recalled over and over again the last field firing exercise. We learned a great deal from the firing test and now, on the threshold of the new training year, I would like to reflect on the lessons derived from it.

The closer we came to the time to leave for the firing range the more perceptible became the inner chill of concern. It was just like the very first time. The only difference was that I was now concerned not so much for myself as for my men. The evaluation which the crew would receive at the firing range would also be an evaluation of my own work.

I had as much confidence in Junior Sergeant N. Mart'yanov as I had in myself. I could also count on Private 1st Class A. Borodin without any special doubts. Both of them had taken part in exercises more than once and both were highly rated specialists. How would Private A. Moshko perform, however? The soldier would be servicing the entire firing range. He had become an operator, and only a third-class operator at that, a few weeks before.

I could have taken a more experienced specialist to the firings, one who was serving his second year, instead of Moshko. It was important to me, however, to develop a seasoned specialist, one who had smelled the powder of the firing range, in the group of new missilemen. The battalion commander and the political worker supported my proposal.

And so training sessions under unfamiliar conditions had begun for us. The operators worked conscientiously. Even during the periodic technical servicing, whenever a few free minutes could be found, they requested permission to train. I naturally went along with them. They followed each other's work critically, noticed each error and lack of skill, and exchanged opinions as to how best to perform one operation or another taking specific firing range conditions into account.

During one of the first training sessions Private Moshko did not precisely consider how the "enemy" could use the terrain for a concealed approach to the facility.

We devoted several classes to this matter. In these classes we worked out problems of detecting and tracking targets at their lowest possible altitudes. The operators again studied the effect of irregularities of the terrain on the station's detection range, determined the screening angles for each direction and evaluated the capabilities of the different means of air attack operating at various altitudes. One of the terrain features drew our attention most of all. If an aircraft should approach from that direction and carry out a sharp maneuver at the very last moment it would be in the immediate proximity of the position. In order to avoid any surprises resulting from this I created similar situations using a simulator, and the operators worked out the mission broken down into elements. Their actions became more confident and precise each time.

When the station was turned off training sessions were conducted at the "cold" panels. Such sessions essentially consisted of the following. I would name the type of aircraft and report its coordinates, while my subordinates, knowing the performance data and the screening angles in the direction indicated, would determine the point on the screen at which the reflected signal from an actual target would appear, and in what length of time. At the same time the specialists had to consider possible "dead" tracking zones created by the unevenness of the terrain and to select the best operating conditions for their equipment.

Meetings with the crews of subunits which had just carried out training launches were of great benefit to us. Upon returning from neighboring subunits I utilized their experience to conduct yet another special training session. Before beginning it I purposely altered some of the equipment's initial electrical settings. The station began operating. As always the specialists calmly detected and tracked the targets, and gave their coordinates. I detected immediately, however, that the information they were reporting was erroneous. And when I told them of this during the critique of the training session they began to exchange looks of disbelief, as though this were not possible. I then asked them to check the readings on some of the instruments. At this point the operators understood what was wrong. The conclusion was obvious: it is not enough to have an excellent picture of the station's visibility zone and to have a thorough knowledge of the possibilities of our own equipment and enemy weapons. It is also essential to keep an eye on the functioning of the equipment, to maintain optimal operating conditions for each system.

The day on which we were to carry out the practice launching was inclement and overcast. It had been windy since morning and heavy clouds hung over the firing range. Targets would soon appear above the dense cover, impenetrable for the human eye. How many would there be? At what altitude would they rush toward the target? What tactical methods would they employ?

The crucial moments arrived. Senior Lieutenant A. Kurdenkov, launcher control officer, the operators and launcher numbers were all at their positions.

The sweep of the remote plan position indicator described its first circles and the air situation was depicted in every detail. There were many targets in the air. They were travelling in various directions, at various altitudes and under cover of a dense curtain of interference. There were fighters operating with the missilemen. The most important thing for us under such conditions was to select the target without error.

Senior Lieutenant Kurdenkov, launcher control officer, was issuing precise commands. His calmness transmitted itself to the entire crew and gave each specialist confidence. Now a situation had developed in which it would be best for Private Moshko to switch from manual to automatic tracking. Tense as the situation was the young officer did not miss the moment, carrying out the operation confidently and rapidly.

Private 1st Class Borodin and Junior Sergeant Mart'yanov demonstrated skill, stamina and resourcefulness. They were not taken aback by the fact that the "enemy" was making maximum use of favorable terrain and was employing all sorts of tricks. Even in the extremely difficult situation, made so by the interference, errors in tracking the targets, as recorded by the monitoring and recording equipment, were minimal.

The battalion received the order to destroy the target. It was launched a great distance from our position. However, the crew of the reconnaissance and target designation station "took" it with the first shot, so to speak. The missile had barely gained altitude and set out on a horizontal course when Senior Lieutenant Kurdenkov reported its coordinates. I made a small turn with the antenna control knob and then another. Now a tiny blip from the target also appeared on my screen. These were crucial seconds! They would now require of us everything which we had accumulated day by day throughout the training year.

Within a matter of seconds the winged missile target had covered an enormous distance. The launcher control officer gave the final command and I pressed the launching button.

"An excellent launching!" I heard the senior commander's voice over my shoulder. These were familiar words, heard more than once before. They were now filled with special meaning for me. Special, because they applied to my men, including Private Moshko, who had only six months of service behind him. Special, because they attested to the fact that we had successfully fulfilled our commitments in the competition.

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CSO: 1801

TRAINING RADAR OFFICERS TO TAKE INITIATIVE IN ACTION

Moscow KRASNAYA ZVEZDA in Russian 13 Nov 76 p 2

[Article by Maj Gen L. Boldyrev, chief of radar troops of the Red Banner Baku Air Defense District: "The Importance of Initiative"]

[Text] Reflecting on the past training year, recreating in the mind a picture of the training periods, drills, and episodes at tactical exercises, one sees repeatedly how important the initiative of radar officers is in modern warfare. He can have all the necessary data on the enemy, and know the capabilities of the radar equipment very well, but if he does not have self-reliance and initiative at the crucial moment, if he waits for suggestions "from above," he will not succeed.

It is still fresh in my mind what happened to officer V. Yarovskiy during a drill against real targets. He learned that one of the planes in the air at that moment was maneuvering by heading and deviating from its previously chosen route. It was plain that the radar set operating at the time would not detect the enemy. The situation itself suggested the only intelligent way out, to put another radar with different tactical-technical specifications into operation. At the crucial moment in battle, however, the officer waited for a suggestion from the command post and did not take the initiative.

Needless to say, actions were taken and the target was tracked, but the officer's delay still had an effect: the data on the plane were incomplete in one leg of its route.

The nature of battle against an aerial enemy today is such that a radar commander cannot expect to receive constant, exhaustive instructions from senior officers in all stages of combat actions. He himself must make the important decisions and firmly and determinedly put them into effect relying on a precise knowledge of the combat mission and a thorough understanding of ways to perform it under different conditions.

Experience from drills against real targets and exercises conducted during the last year provide many examples of intelligent, enterprising, and determined actions by commanders. Officer V. Khabarov found himself in a

difficult situation at one of the drills. In a matter of seconds he analyzed the nature of the actions of the aerial enemy and figured out his exact tactical tricks. Officer Khabarov immediately assigned radar operators to search for the target. He gave primary attention to data from the station which had the most advantageous location. As the further course of events demonstrated, the officer had acted correctly. If he had delayed it would have been very hard to track the target.

I would like to emphasize that seconds played a key part in both cases. This is not mere chance. The time factor, which was important before, has become especially critical today. It inspires commanders to work on fast thinking and acting with initiative, determination, and precision. In a very short space of time the commander must evaluate the air situation and make a sound plan. This demands profound knowledge and solid skills.

During battle with an aerial enemy the command post receives a large, continuous flow of information which quickly becomes obsolete. To sift out everything unimportant and secondary and identify the main, determining information is not an easy job. Under these conditions the radar commander's initiative and administrative ability show themselves first of all in that, without waiting for instructions, he insures coordination of the actions of his subordinate teams, makes maximum use of automated means for collecting and processing essential data, and strives to cut down the travel time of commands, instructions, reports, and signals. Of course, these things are achieved by well-planned drills in conditions close to those of real battle.

The situation in battle may also shape up in such a way that the commander has a limited amount of information that, moreover, is fragmentary and contradictory. But even in these conditions he must quickly reach an optimal plan on the basis of information from all types of reconnaissance. The enterprising officer immediately organizes additional radar reconnaissance to refine the plan he has adopted and to suggest actions in case of unexpected maneuvers by the aerial enemy, actions to protect personnel and equipment against weapons of mass destruction, and so on.

Of course, not even the most detailed instructions can provide formulas for every possible case. For radar troops the situation in battle depends on many factors: the structure of the enemy grouping, the density of his battle formations, the intervals between targets, the nature and intensity of countermeasures used by the enemy, weather conditions, the season and time of day, and so on. Therefore, a commander's initiative also includes, in addition to practiced variations of combat actions, additional actions to uncover the enemy's intention as early as possible.

To act with initiative and self-reliance means to direct one's thoughts, will, and organizational abilities to the search for bold, trouble-free plans, to make provision ahead of time for the possibility of maneuvers with forces and means, and to try to forestall the enemy. It is relevant here to mention the role of anticipation in battle. It is well-known that

anticipation (or "foresight") is a result of previously accumulated experience, skills, and knowledge and a thorough analysis of the situation as it takes shape. Therefore, one must rely not only on natural wit and resourcefulness or the unexpected "talent" which supposedly appears by itself in a difficult situation, but also and primarily on a profound knowledge of the tactics of the enemy and the high level of combat training of subordinates, their moral and psychological conditioning. The ability to anticipate is a very valuable quality for a commander; it must be developed.

Initiative and self-reliance -- these and other characteristics which determine a commander's level of readiness to control subordinates in the most complex situation are acquired while standing combat duty and at tactical training periods and drills. Some officers may wonder how we can talk about creativity when the controlling documents prescribe everything: how to train combat teams, how to stand duty, what to do after this or that signal. This view cannot be accepted. While they are largely dictated by regulations, daily training periods and drills still leave a broad area for initiative.

Allow me to refer to the experience of Sr Lt V. Trofimov, a commander of one of the radar subunits. During a drill against real targets Pvt S. Zaytsev reported detection of a plane and immediately added, "The blip is unsteady." It was found that the target was flying at low altitude. Another might not have paid attention to this part of the report. But Senior Lieutenant Trofimov immediately drew the necessary conclusions and, not waiting for instructions, ordered another radar set to begin tracking the target. He did this at the right time, for the plane soon left the visibility zone of the first set. Private Shul'skiy began calculating the data. The mission was performed with an "outstanding" mark. That is the value of intelligent initiative.

Emphasis must be placed on practical development of skills to instill radar officers with a quality as valuable as initiative. It is not hard, for example, to memorize the flight and tactical performance of enemy aerial weapons. It is much harder to use this information to quickly determine the type of an airplane or winged missile on the radar screen by the parameters of its flight.

Training periods, drills, and exercises will bring maximum benefit only if they are conducted against a tactical background which inspires officers to self-reliance and initiative and precludes any inclination for stereotyped formulas and looking to senior officers for help. Unfortunately, the subject matter of command training periods is still not thoroughly thought through in certain subunits; they fail to take account of changes in the tactics of the aerial enemy and new, progressive methods of radar reconnaissance.

Life demands greater attention to drills for practice and group exercises. Solving tactical problems develops officers' skills in rapid and intelligent analysis of the air situation. For example, here is how group exercises are conducted in the subunit commanded by Capt A. Sorokin. A

certain time is allocated for solving each tactical problem and the time is reduced gradually from drill to drill. During the exercise officers learn to "read" the air situation (which is registered on a mapboard or film slides), summarize the information, reach conclusions quickly, and report them concisely. It is typical that each particular slide is shown for a definite, strictly limited time. Then each officer reports the air situation from memory. The answers are compared and marks are assigned. Another method used is to show an air situation which has been represented incorrectly (targets incorrectly joined, numbered, and so on). The officers are asked to find the mistake quickly and then report the correct solution.

In short, there are many forms and methods of training which have shown themselves to be effective and they must all be adopted and used more extensively in accomplishing our missions during the new training year. It is important to consistently study modern aerial weapons and carefully analyze the lessons of training periods, drills, and exercises. We must strive to steadily improve the tactical training of radar officers and make this training a realistic approximation of modern warfare.

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SOLDIERS' LETTER TO EDITORS MISHANDLED IN THEIR UNIT

Moscow KRASNAYA ZVEZDA in Russian 13 Nov 76 p 2

[Article by Lt Col-Engr B. Lyapkalo: "There Is Still Time"]

[Text] In the last days of August the editors received a letter from a remote radar point. It related that in the autumn of 1975 Sergeant Nesteruk, PFC Nikonorov, and Private Bokhan had passed the tests to raise their rating qualifications. But some time later they had to take the tests again, and then they passed them a third time. Only after this were they finally given the qualifications of specialists second class. But they still did not receive their monetary compensation.

The letter also said that since that time Sergeant Nesteruk and Private Bokhan had once again not received qualifications, this time for specialist first class, although they passed the examination the previous spring. The subunit commander, according to the letter, had raised the matter with the unit command and political branch a number of times, but without result.

The editors sent this letter to the senior headquarters for review. Unfortunately, time pass but no answer was received from them. What had caused such a lengthy delay?

I traveled to the N garrison and talked with workers at the headquarters to which the letter was sent. I learned that the senior officer had turned it over to officer V. Kostriko. But it was not entered in the logbook for suggestions, notices, and complaints. Ensign L. Anokhin had wanted to record the letter at the branch but they stopped him, saying, "Don't be in a hurry, there is still time." That by itself is a violation of established rules for handling letters.

Here is how events followed after this. Officer Kostriko assigned officers S. Chumakov and G. Sosunov to check on the letter. Two weeks later, however, he changed his mind and gave the assignment to officer R. Yelizarov. This meant that the review of the letter was now assigned to the party against whom the complaint was directed. So here is another violation of rules for handling letters.

By telephone I contacted comrade Chumakov, who was supposed to check the letter.

"The reply to your editors?" my distant informant said. "It is ready. The soldiers' complaint was entirely justified. Those responsible for untimely payment of the monetary compensation have been disciplined."

"Exactly who do you mean?" I asked.

"Do you need that? I can add it on," I heard his answer.

"And what kind of assessment has been made of the red tape involved with awarding the specialists their rating qualifications, if there was such a problem?"

About this comrade Chumakov was unable to say anything concrete. Yet he was exactly the one, as head of the service, who should have analyzed the work of the qualifications commission. He had not inquired about the reason for the delay in responding to the editors either. Probably he considered it unimportant. That is a shame.

We believe that the senior officer and political agency will give a principled evaluation of the violations of rules for handling letters by servicemen and the shortcomings in the work of the qualifications commission.

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RULES FOR OFFICER REPAYMENT OF DAMAGE CAUSED BY NEGLIGENCE REVIEWED

Moscow KRASNAYA ZVEZDA in Russian 14 Nov 76 p 2

[Reply to servicemen's letter by Maj Gen Just N. Tolkachev, military procurator of the Kiev Military District: "If Something Is Damaged..."]

[Text] Respected editors!

In our unit, it seems to us, an abnormal situation has developed. When organizing and conducting training periods using the equipment some of our commanders are more concerned with seeing that nothing is broken than with training personnel well. And the whole reason is that cases of officers being held responsible for repayment of losses have become more frequent.

We understand very well that it is necessary to take good care of the weapons, combat equipment, and other gear entrusted to us. In some instances, negligence and carelessness which lead to damage should be punished, including repayment of the damage. But it is apparent that not everything is being done according to law in our unit with respect to this matter.

Maj. B. Shchetinin, Sr Lt
Ye. Dolgirev, and Lt V.
Protsenko, Kiev Military District

Unfortunately, letters such as this are not uncommon in the mail of military justice agencies. They show that not all officials with the right to hold culpable persons liable for material damage are using this right correctly.

Let me stipulate at once that this letter, which was checked by our procurator's office at the request of the editors, and most of the others are talking about damage which is not deliberately caused. So there is no criminal liability; the matter is resolved administratively. And from lack of experience some commanders believe that a careful review of the circumstances of the case is not compulsory here.

Here are just two incidents in the background of the letter by officers Shchetinin, Dolgirev, and Protsenko. In the first the driver of one of the combat vehicles performing a march let the engine overheat and the vehicle broke down. In the second a driver at a battle drill exercise did not notice a snow-covered trench and went into it, also overheating the engine trying to get out.

The same approach was applied to both these externally similar incidents in the unit: the subunit commander had to pay for the damage. And not a thought was given to the personal culpability of the officers. However, culpability is directly stipulated by the appropriate regulations dealing with material responsibility of servicemen for losses caused to the state. Before an officer can be charged for such damage it must be established that he was personally negligent in the performance of his service duties.

Was the subunit commander negligent in organizing the march? He was not. The officer instructed his subordinates and monitored their driving speed and drivers' observation of safety rules. The only one who could be held responsible for one vehicle's breaking down was the driver of the vehicle himself. Therefore, the officer cannot be charged for the engine repair work. Following the protest of the military procurator the unit commander's decision in this matter was canceled, and the money collected was returned to the officer.

But in the incident at the battle drill exercise the subunit commander was culpable in the vehicle breakdown. According to the rules for organizing such training periods, he should have made sure that dangerous areas were marked off and that means were available to pull out stuck vehicles. If there had been a primemover nearby, as regulations call for, the driver would not have had to pointlessly race the engine of the vehicle in the trench and it would not have broken down.

Only physical damage can be charged for. It was incorrect in the N unit when they charged an officer a certain sum for conducting a preliminary investigation at the wrong time. Of course, the actions of this officer made it harder to establish the circumstances of the theft of military property from the unit storeroom. But the officer's negligence by itself did not cause a material loss, and that means he must answer only according to the Disciplinary Regulations.

It should also be kept in mind that material responsibility is not a disciplinary punishment and thus does not preclude the application of both a monetary charge and disciplinary measures to a wrongdoer.

Soviet laws and other enforceable enactments provide for reliable protection of socialist property against damage, theft, and other improper actions. The existing rules which require culpable persons to repay the damage they have caused assist in this. One must know these rules well to see that neither the state's nor the serviceman's legal interests suffer.

PORT ARTHUR REGIMENT STRESSES PHYSICAL TRAINING, NEW APPLICATIONS

Moscow KRASNAYA ZVEZDA in Russian 17 Nov 76 p 2

[Article by Maj M. Skoromnyy: "The Tactical Variation"]

[Text] The orderly gave the command for reveille and within a few minutes the fighting men of the company commanded by Guards Sr Lt A. Kiselev began to prepare for morning physical exercises. But, strange to say, the soldiers and sergeants fell into formation with their automatic weapons and gas masks, wearing helmets. Noticing my puzzlement, the company first sergeant, Sr Sgt I. Tyuklenkov, explained:

"Today we're using the tactical variation. We're preparing for exercises."

This was an unusual morning exercise session. After limbering up briefly, the motorized riflemen advanced at a quick march toward the slope of a high hill and began an assault on its peaks. They scrambled agilely up the rocky slopes, climbed over fallen trees, dove into holes, leaped across trenches, and advanced by leopard crawling. In short, they acted as if they were attacking an enemy strongpoint.

"That's right," Guards Sr Lt A. Kiselev confirmed my thought. The officer explained that physical exercises with a tactical element were being done to develop the trainees' ability to withstand prolonged physical exertion, a trait essential under the mountainous conditions of the Transbaikal region. After all, it is one thing to attack by running across flat ground, but something quite different to run uphill. It should also be noted that during such physical training the men not only receive good muscle exercise and develop the respiratory system, but also they are at the same time practicing actions on the attack and learning to adapt to complex ground relief.

It is typical that they are constantly changing the routes laid out in the hills for morning physical training by the tactical variation; they make them more complex. Another advantage of such training is that each man tries to conquer all obstacles as quickly as possible and be the first to reach the top.

The creative approach to organizing physical training is characteristic of most of the subunits of the Port Arthur Regiment. The guards motorized riflement more and more often combine work on the combat standards with physical training.

It has become a rule in the regiment to go to combat work on the equipment or firing the personal weapon immediately after a cross country run, a quick march, or going through the obstacle course. In other words, as it will be in a combat situation. At field training periods personnel move around by quick step or running at all times and ammunition is delivered to the combat vehicles at the firing range manually from vehicles which stop far from the starting line.

Mass sports work in the unit is also subordinated to the task of raising the level of physical conditioning of personnel and improving their field training. In the outstanding company commanded by Guards Sr Lt V. Ishchenko, the mechanic-drivers of the infantry combat vehicles work out in the weight-lifting section; they do strength-building exercises and run 200-400 meters with weights. To develop agility and endurance the grenade throwers and machine gunners stress gymnastics and cross country, practice cliff scrambling, and enjoy boxing and wrestling. The operators and gunners prefer basketball, table tennis, and chess, sports which enable one to develop fast thinking and coordination of movement.

Guards Sr Lt V. Ishchenko experiments and looks for ways to develop the skills and habits his subordinates will need to perform combat missions under difficult conditions. The "reserve of strength" that the commander is building by complicating the situation in training periods enables the men of the company to operate effectively at exercises.

I chanced to attend one such exercise. The company was assigned to march 20 kilometers on foot to reach the rear of an enemy who had taken up his defense on the top of a high hill. Then the company was to deliver a surprise strike. The time for this maneuver was very short and the umpire doubted that they could do it.

"The men are tired and the relief of the terrain is complex. I am afraid you won't be able to give us a surprise attack," he said to Guards Sr Lt V. Ishchenko.

"My soldiers are in good condition and will carry out the assigned mission," the officer responded.

The commander was right about his subordinates. After quickly, agilely mastering the rocky cliffs of the hill the soldiers attacked the enemy on the run and won the battle. And each one of them probably had a grateful thought for the tactical physical training periods in the hills and the intense field drills with the equipment which helped them acquire their strength and endurance.

Another type of training, the so-called "poputnyy" [associated, by-product] drills, also help bring physical training closer to the needs of combat training and the field training missions of regimental personnel. These drills were held before, but they did not have the proper benefit because they were conducted according to a stereotyped plan. Today the methods for conducting "poputnyy" drills have changed. For example, company commander Guards Sr Lt V. Lukonin gives his subordinates the most varied inputs: yesterday it was to evacuate malfunctioning equipment while under enemy fire, today it may be to load and unload riflemen from vehicles while moving combined with a running drill, and so on. The time standards are determined in this case too.

The campaign for high quality training has been reflected in the methodology for organizing physical training periods as well. These periods have become more dynamic and full. They are especially beneficial in the platoon commanded by sports master Guards Sr Lt Yu. Shchekalev. For example, take the lesson in gymnastics. The soldier who has just worked out on the horizontal bar does not go back into formation when the next man comes up. Instead he moves to the gym ladder and performs strength-building exercises with his arms and develops his stomach muscles. After exercises on the parallel bars the trainees lift cartridge cases and climb a pole or rope. The period ends with a combined relay contest.

Certain physical training exercises are done in the course of battle drill training periods to see that the skills acquired help accomplish definite and concrete problems which arise at exercises and in field training periods. During work on the topic "The Company on the Offensive" in one of the subunits, Guards Sr Lt A. Bepalyy, a physical training specialist, taught the riflemen to fight with bayonets, familiarized them with sambo [unarmed self-defense] procedures, and trained them in overcoming various obstacles. Certain physical exercises done by the men before tactical exercises develop their strength, agility, and combat qualities. The use of smoke, incendiary mixtures, and explosives at training periods also helps in this.

One of the broadcasts of the television program "I Serve the Soviet Union" showed how agilely and fearlessly the men of the Port Arthur Regiment overcame an obstacle course which had simulated weapons. They had prepared quite long for this training period and it helped the participants to acquire fighting characteristics. Unfortunately, training periods with an element of risk are not held often enough and are usually just for show. This happens because it is hard for the subunit commander to organize a drill with his own forces. It is obvious that such training periods could wisely be conducted on a unit scale.

The methodology of conducting physical training periods in the course of tactical exercises is not entirely perfect. Because they spend long periods in conditions of restricted mobility, radio operators, mechanic-drivers, and other crew members need a special set of exercises which allow them to work off tension and keep their work capability high.

The struggle to raise the quality indices of combat and political training is the main point in competition this year. This applies in full to the complex, multifaceted process of physical conditioning for personnel. In the regiment they try to make conditions of physical training as close as possible to the needs of combat training and to give them special orientations. The high marks which the Port Arthur Regiment had at the end of the training year are evidence that this is an effective way.

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IMPROVED TRAINING FACILITIES, METHODOLOGY IN CENTRAL ASIAN DISTRICT

Moscow KRASNAYA ZVEZDA in Russian 21 Nov 76 p 2

[Article by Maj Gen Tank Trps D. Pavlov, deputy commander of troops in charge of combat training in the Red Banner Central Asian Military District: "The Reserves in Methodology -- Reflections on the Results of the Training Year"]

[Text] Preparing for the new training year each commander analyzes the experience of the past over and over. This helps see more clearly the areas where all reserves have not yet been used. In my opinion, a problem which deserves special attention is improving the methodological training of officers, above all new officers: platoon leaders and company and battery commanders. A second important problem is developing up-to-date physical facilities for training and using them efficiently.

Methodological training was a subject of special concern during the last training year, a year permeated with the spirit of hard struggle to improve the quality of training periods. This is natural. In large part the efficiency with which training time is used and the time needed to master new equipment and weapons depend precisely on methodological training. This training for officers has become more purposeful and effective in many units and subunits. It is closely coordinated with the performance of concrete missions facing the military collectives and takes account of the specific characteristics of the missions. As an example I will refer to the regiment in which Maj A. Khokhulin is deputy commander.

Constant attention is given to improving the professional skills of new officers by the senior officers, and party organization of this unit. The new officers are actively involved, for example, in preparing methodological developments on various topics. Of course, it is harder for recent graduates of the military schools to handle such creative assignments than it would be for experienced commanders and staff workers. Mistakes and failures may occur. But each individual in the regiment is given a chance to "defend" his development and, after hearing the opinions of fellow officers, to supplement and polish it. It is important that each time a new officer performs such an important and

difficult assignment that he reach a new level of methodological skill and enrich his knowledge of military pedagogy and psychology. But the main thing when setting up a demonstration training period or open lesson is that he strengthens contacts with his senior comrades and borrows extensively from their experience. The senior comrades, in their turn, receive a good chance to study the individual characteristics of the young offer and work next to him on concrete problems.

Each officer in the regiment who participates in conducting training periods with personnel has a plan for personal methodological training. Fulfillment of this plan is monitored by the commander and the staff. Naturally, most of the training periods in the unit are interesting and instructive, permeated with a spirit of competition for outstanding performance of the subject and good fulfillment of the exercises and standards. Personnel ended the year by completely fulfilling their obligations and achieving consistent success.

Today as never before creativity in methodology is important. The troops are receiving ever-more complex machinery which they must master in ever-shorter times. Life itself demands steady improvement in training methods. Intensification of the training process is the main way to unite the efforts of each and every one. And intensification today is not assured by increasing the number of training periods, exercises, and drills (it is harder and harder to find time reserves), but rather by improving the quality of the training process, the return from each minute.

Unfortunately, in practice one must sometimes encounter simplified understanding of training intensity. For example, the high requirements made of exercises with field fire are well-known. The criteria by which the training of subunits should be evaluated are also precisely defined. Nonetheless, a number of shortcomings in the organization of exercises were revealed during the last training year. How are they to be explained?

Planned exercises with subunits are sometimes set up in a simplified, rushed manner. This gives rise to stereotyped intentions and repetition of the same tactical and target situations. This happened, for example, in the subunit which was commanded by Capt V. Yerk. Sometimes company exercises have such packed schedules that there is just not enough time for many things.

Numerous shortcomings which typify other forms of training can also be mentioned. With them too, the explanation is usually lack of proper, thorough preparation. Unit commanders, political agencies, and staffs must be very firm in fighting against simplification and indulgence.

The qualitative indices of combat training are higher in units where the commanders teach new officers to work with an eye to the future, give them a taste for creativity in methodology, and carefully summarize everything learned from practice.

We have many time-tested forms of methodological training for officers. Among them are methodological assemblies, instructor training periods and practice sessions, demonstration training periods and open lessons, conferences, and exchange of know-how. Where they are rationally combined, careful preparations are made, and there is a close tie-in with the missions being accomplished by the military collective, they help officers consistently improve their military-pedagogical perspective and skills. The quality of combat training activities and the effectiveness of socialist competition in the new training year will depend on how fully we are able to use reserves in this area.

Intensification of the training process is inconceivable without development and improvement of physical facilities for training, raising the carrying capacity of training sites, and insuring reliable technical monitoring of the performance of exercises and standards and execution of fire and other missions. It is impossible to master contemporary equipment and weapons quickly and create a situation at training periods and tactical exercises which maximally approximates that of actual combat without automated and electrified training fields, extensive use of trainers, simulators, moving models, and various kinds of electronic examining devices.

Commanders, political agencies, staffs, and party and Komsomol organizations in the district are devoting considerable attention to improving training facilities and using them correctly. A great deal was done in that short period which separates the old training year from the new. Let us refer to the experience of those units whose training facilities are up to current requirements. In the regiment where Maj A. Khokhulin is deputy commander, for example, a reliable feedback system to report target hits has been introduced, a sufficient number of simulators has been built, and trainers are used extensively.

As training facilities are developed the problem arises of using them well, taking full advantage of their capacities. Some subunits have everything needed to provide good material support for training periods, but they fail to use their up-to-date technical means in the best way.

Problems of this kind were uncovered in the N unit. It turned out that certain new training leaders did not know how to use technical training aids and were unsure of their design and capabilities. This caused them to be timid, try to simplify the content of training periods, and conduct them in the old ways.

As the experience of leading units shows, however, a great deal can be accomplished by improving the use of training installations. For example, one regiment determined experimentally that use of a more reliable feedback system to report target hits almost doubled the intensity of training periods and drills.

We expect a positive effect from the use of electromagnetic outline targets, which are being introduced by efficiency workers in the district.

This kind of target makes it possible to records hits very reliably when firing regulation shells from tanks.

If they are skillfully led and given concrete missions, the collectives of efficiency workers of the units and subunits can make a substantial contribution to improving training facilities. Staffs must always remember this great force, needless to say, and give innovators all possible help in carrying out their creative plans while directing the mobilizing force of socialist competition to development of physical facilities for training.

The use of simulation means at training periods and exercises should be analyzed self-critically. The art of creating the appearance of modern warfare is closely tied to the quality of training and the psychological effect on personnel. There have been many advances in this field. But there are also problems. The chief one, in my view, is poor simulation support for training periods and exercises with small subunits. Usually, the larger the scale of the exercise the more resourcefulness and skill specialists will show in creating a plausible appearance of battle using simulation means. In such cases, however, the simulation is usually far from the ordinary participant in the exercise. It is set into operation when the subunits are still just moving toward the line of attack. Must one point out that this is not the best way to toughen personnel psychologically? Here too, it seems to me, a creative approach to the organization of training periods in the field and consideration of all factors could reveal many reserves.

Preparation for the new training year is being completed among the troops. An organic part of it has been interpretation of the experience of last year, drawing lessons, and solid organizational work to introduce leading methods of technical and moral training. The commanders, political workers, staff officers, and party and Komsomol organizations of the district, inspired by the decisions of the 25th CPSU Congress and the October 1976 Plenum of the CPSU Central Committee, are searching hard for ways to raise the quality of combat training and the effectiveness of socialist competition for a worthy celebration of the 60th anniversary of the Great October Socialist Revolution.

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LENINGRAD NAVAL SCHOOL ENCOURAGES STUDENT SCIENTIFIC PROJECTS

Moscow KRASNAYA ZVEZDA in Russian 21 Nov 76 p 2

[Article by Rear Adm-Engr B. Lapshin, chief of the Leningrad Higher Naval Engineer School imeni V. I. Lenin: "Invitation to Creativity -- Higher Educational Institutions, Thoughts and Searching"]

[Text] Lt-Sr Engr Yu. Fedosov is known as an outstanding specialist on the ship where he serves. At the same time, the name of this graduate of the Leningrad Higher Naval Engineer School imeni V. I. Lenin is well known at a certain scientific research institute. This is no accident. While still a cadet Fedosov began work on an important scientific subject. It later became the basis of his diploma work. The gold medal winner continued his investigations on the ship to which he was assigned. The results of his work were used in building the industrial prototype of an electronic trainer. In this way, an idea from a former cadet who is now a naval officer helped raise the combat readiness of the navy.

Many such examples could be given. And they all illustrate that the ability to search creatively is an important characteristic of the current officer, one which has a significant effect on his success in the service and reflects the effectiveness of his labor not only in the area of operating complex combat equipment but also in technical and moral training of subordinates. Therefore, instilling a taste for creative work in the future specialist and teaching him the methodology of investigating and modeling the processes or phenomena under study is becoming one of the important missions that must be accomplished while the student is still at military school.

One sometimes hears that the student workload is already very great. How, people ask, can anyone mention scientific work seriously under such conditions? But we can! To be successful, however, the student must be interested, involved.

At the Leningrad Higher Naval Engineer School imeni V. I. Lenin we have now outlined definite ways to solve this problem. In our view, the most effective factor which can inspire and interest in scientific searching

and creativity is a well-organized system of scientific-technical information. To carry on a project one must have a clear idea of its most pressing lines of development, unresolved issues, and possible variations of investigation.

In the last year alone the cadets at the school heard about 200 reports and communications on interesting scientific problems. Prominent scientists such as USSR Prize winner G. Bobchenok, Rear Adm-Engr (Res) G. Bogdanov-Kat'kov, Capt 1st Rank-Engr V. Knyazev, doctor of technical sciences, and many others spoke to the future officers.

So, let us suppose that the cadet's interest in scientific work has been aroused. Does this mean that the rest of the process of active participation in it will follow of itself? It certainly does not! The next stage and a very important one is choosing the topic for independent investigation.

The approach here must, of course, be highly individualized. And it is very important for each department to be able to offer the young investigator the broadest range of questions needing solution. Suppose the cadet has a lively interest in chemistry. Experienced teacher I. Spirin finds a topic related to ship lubricants and fuels for him. If the future officer is interested in electronic modeling of the work of a power plant he will be invited to the group headed by Capt 1st Rank-Engr G. Aleksandrov, a docent.

One should not think that a cadet's scientific work can only be expressed in the form of an independent, fairly basic investigation of a particular problem. On the contrary, practice shows that such investigations succeed comparatively rarely. There is nothing surprising in this; it results from relatively inadequate knowledge and lack of the ability to correctly evaluate and analyze the results obtained. Nonetheless, the partial "failures" should not discourage either the students or their scientific directors. After all, the main goal is to acquire research skills and the ability to think and look ahead.

Work on topical reference papers is a tested and fully proven method of involving cadets in scientific investigations. Making use of foreign and domestic naval and technical literature in their preparation, the future officers learn the skill of finding the information that interests them in books and reference works and learn to think logically and process the information obtained from various sources.

When organizing and conducting scientific work among students one must always, in my opinion, give thought to the purely psychological aspect. It is a fact that a person of any age, but especially a young person, wants to see the fruits of his labor.

All this illustrates that the scientific work of cadets is closely tied to efficiency and invention work. This is exactly the goal set by the teachers and professors of most of the departments at our school.

It was thanks to such an approach that cadets under the direction of candidate of technical sciences Capt 1st Rank-Engr V. Lomot' developed and built (let me emphasize that "built") an original trainer which specialists have acknowledged as suitable for mass production and introduction in the navy.

A similar problem was solved in working out an electronic trainer which makes it possible to practice virtually all operations involved in control of the steam plant of a modern ship. In addition to the pleasure of creative labor, each of those who participated in the project experienced a feeling of justified pride: the training of hundreds and hundreds of their comrades is now better, more effective!

I do not think we should ignore such a form of activating cadet creative activity as contests for best knowledge of the specialization. They were first organized in the department headed by doctor of technical sciences Capt 1st Rank-Engr A. Lokhmatov. At first glance such contests are not directly relevant to research activity. In fact things are different. Modern equipment is very complex and one must have deep and varied knowledge to take an active part in the discussion of the particular questions. This knowledge can be drawn from additional reading, new periodical publications, and from consultation and talks. Therefore, the contests inevitably inspire cadets to search creatively and profoundly comprehend the particular material.

When speaking of inspiring an interest in creativity among students, one must not forget their substantial school workload. Therefore, scientific work with cadets must be based on precise planning.

Our school has councils of cadet military-scientific societies (VNOK's) in all faculties. Furthermore, each department appoints a teacher who is responsible for organizing a VNOK in his particular discipline.

The teachers of the departments skillfully direct their students to work on particular research questions while doing practical training on ships. Many cadets also receive and successfully perform additional assignments during this period which make later work on the diploma project easier. For example, cadet A. Chalyy in his day defended a diploma project based on findings collected during practical sea training.

It would be a mistake to think that all the problems of involving cadets in scientific work, in creative searching, have already been solved at our school. Unfortunately, the upperclassmen show the greatest activity so far and we have not been so successful with the younger classes. We do not always have succession in the subject matter of the general science, general technical, and specialized departments. But the command, political branch, and party organization of the school have these questions under study and are working hard to solve them

It was said at the 25th CPSU Congress that the present-day leader must combine in himself the qualities of party loyalty and profound communist conviction, discipline, initiative, and the creative approach to work.

While giving technical and moral training to our future officers we must not forget for a minute what the party demands. The ability to think creatively, to solve the problems which arise scientifically, will help them train their subordinates more effectively and struggle actively to continue raising the combat readiness of the Armed Forces.

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CSO: 1801

COMPUTER WORK, SUPPLY SCHEDULING SUCCESSFUL IN MILITARY CONSTRUCTION

Moscow KRASNAYA ZVEZDA in Russian 23 Nov 76 p 2

[Article by Col-Engr (Res) N. Vinogradov: "The Computer Saves Resources"]

[Text] Sergeli, a satellite city of Tashkent with more than 150,000 square meters of housing and all cultural-domestic and sports facilities, roads, and utilities, was built by military construction workers in record time, seven months. There is no doubt that the enormous enthusiasm of the military builders and the uninterrupted stream of materials, machinery, and equipment promoted success in such a large-scale construction job. But another important factor in accelerating the pace of construction was precise work organization, which was achieved by working according to composite critical path schedules developed by computers.

P. Borbat, the USSR Ministry of Defense representative (today a colonel-engineer), sent the raw data for calculations from Sergeli to Moscow by teletype. There his assistants developed the critical path schedules by computer and, a few hours after the raw data came in, the schedules arrived at the construction sites of the satellite city in the form of alphanumeric data.

The length of construction of particular objects, time reserves, and deadlines for delivery of materials and equipment were determined on the basis of the calculations. But the critical path schedules did not take the required amount of labor power into account, did not include work volumes in the calculation, and did not produce resource distributions by the month, quarter, and year. Therefore, they could only be used in the first stage, in rough planning.

For more precise planning a new program for conserving resources had to be developed on the basis of the critical path schedules. It was called the "Resource" program. It coordinates work at the sites with the quantity of resources allocated and prevents gaps between construction times and material-technical supply times. It is worth noting that the subsequent experience in using this program in construction showed a 3-4 percent decrease in monetary expenditures from the total cost of construction work.

These developments were received differently in different places. Most contracting organizations of the military districts and fleets approved them. Questions arose with respect to particulars. That is hardly surprising, for entirely new methods of planning and controlling construction were being introduced and the force of traditions had created a kind of "psychological barrier" which was not so easy to get past. In addition, the new methods called for computer equipment at construction organizations. Nonetheless, life forced them to surmount all obstacles.

Military construction engineers such as G. Domanin, K. Bashlay, V. Zubkov, S. Bolbas, Ye. Golenkin, L. Velikanov, A. Katkov, and many others deserve great credit for propagandizing the new methods of planning and controlling construction and introducing them in practice. Lt Col-Engr G. Kotov, one of the directors of this work, listened closely to advice, suggestions, and criticism during his work-related travel. He became increasingly convinced that the program needed further improvement. Kotov knew from his own experience that plans and estimates do not reach all construction sites on time. But without them it is difficult to plan for the essential resources, and such resources often pile up at the site owing to an unexpected plan adjustment.

All of this had to be taken into account in working out new, broader programs to be used as the basis for shaping variations of plans for construction and installation work; and this was for a whole complex of installations scattered over numerous sites. These programs can be used for drawing up plans (construction lists) for construction periods of up to three years in the purchaser's system. If construction is already underway, the programs are used to correct the construction lists which can be changed in the essential way without disrupting the rhythm of work and supply of resources to installations under construction. The advantage of using the computer is that it gives the essential information in the necessary volume at the appointed time. As a result, the manager participates creatively in qualitative analysis, studying final results, and this enables him to adopt more correct decisions.

Such a set of programs has now been constructed. It has been named simply "Plan" and is being experimentally tested in the construction administrations of the districts. The first positive results are in. Specialists are unanimous: these developments will help military construction workers insure a more precise work rhythm and, thus, build more rapidly and economically.

The construction administration of the Leningrad Military District has done a great deal to employ the Akkord set of programs at its sites. These programs make it possible to improve planning at the low levels, down to the section and brigade. There is one problem: the order of construction of installations relies on firm, set plans, but through the fault of certain leaders planning remains highly variable. And so a discrepancy emerges between the highly detailed planning done by

computer and the calculation of resources, which is done manually. There is an answer, of course, but it is not easy: combine the "Plan" and "Akkord" programs into a single unit.

We can now say with confidence that the time when construction workers looked mistrustfully at computers has passed. Computer-issued recommendations today are respected not only by construction site managers but also by the supply services, which sometimes used to unceremoniously cut the requested resources in half.

The capabilities of the electronic "brain" are truly inexhaustible. It is also certain that all issues related to the introduction of computers on a broader scale at military construction sites must be decided at a higher organizational level than the manager's office or the district construction administration. They must be decided in the interests of all capital construction by the USSR Ministry of Defense, not the interests of particular organizations.

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NATO COMMUNICATIONS CAPABILITIES AND DEVELOPMENT PROSPECTS DISCUSSED

Moscow KRASNAYA ZVEZDA in Russian 12, 27, 28 Jan 77

[Article by Cand Tech Sci, Engineer-Colonel A. Chizhov: "Communication Resources: Achievements and Prospects," based on foreign publications]

[12 Jan 77, p 3]

[Text] 1. In the Battle Zone

Introduction of automated troop and fire control systems typical of the present stage of the revolution in military affairs has sharply heightened the demands imposed on communication quality. Moreover, modern battle is distinguished by special dynamism and swiftness, which have also necessitated a new approach to organizing communication and designing its technical resources. Foreign experts turn their attention chiefly at the need for heightening the mobility of communication resources. It stands to reason that this is possible only if the overall dimensions and weight of the articles and the electric power they consume are significantly reduced. At the same time working reliability must also be high in the presence of the destructive factors of a nuclear explosion, sharp temperature changes, high humidity and dust content, shocks, and vibrations. It is just as important, foreign experts emphasize, to make maintenance of communication equipment simple and to reduce the number of specialists required to repair it in the field. But even this is not all.

As a rule automated battlefield troop command and control systems foresee data processing on a real time scale; for this reason the continuity and stability of communication acquire special significance. Thus transmission of a standard query for information occurs in 1.3 seconds in the Talkfire automated conventional artillery fire control system. For this reason an interruption in communication for even a short time would result in loss of target information transmitted from reconnaissance resources (radar stations on the forward edge, thermal direction finding sets, pilotless reconnaissance aircraft, reconnaissance groups, forward observers).

Sharp changes in the battlefield situation and possible destruction, fires, and obstructions can make personal communication, deployment of line communication, correspondence, and delivery of documents to subordinates simply impossible. In this case control would be switched wholly and completely to radio communication. In this case the commander himself would transmit short directives, instructions, and signals to the troops by radio-telephone. What sort of radio communication resources are presently used on the battlefield by foreign armies? What are the plans for improving them in the next few years?

I should state that the level of development of tactical radio communication resources is far from the same in different countries. As an example the USA has already designed radio sets making use of the latest achievements of science and technology, especially in the field of microminiaturization. For this reason some NATO countries purchase modern radio communication apparatus from the USA. Others, for example England, the FRG, and the Netherlands, have been developing new domestically produced apparatus and introducing it into the troops in the last few years. However, most countries still possess American equipment developed in the 1950's.

Ultrashort-wave (UKV), short-wave (KV), and general-purpose (UNV) radio sets subdivided depending on overall dimensions and weight into portable and vehicular are used at the tactical level of control. Portable UKV radio sets are the most widespread and numerous. Incidentally, the recent practice has been to subdivide them further into microminiature and miniature.

Microminiature UKV radio sets are carried in pockets or fastened to the helmet. As a rule they operate within a small portion of the UKV range and have a limited number of operating frequencies. As an example the AN/PRC-88 microminiature radio set is presently intended for short-range radio communication (up to 2 km) in the U.S. Army. A similar set produced in the Netherlands is used in a number of European countries.

The AN/PRC-88 radio set is made entirely of integrated circuits and weighs less than 1 kg. It operates in the 47-57 MHz range. The spacing between adjacent frequencies is 50 kHz, which permits 200 fixed frequencies in this range, out of which two can be tuned preliminarily for operational battle control. The outfit includes a receiver fastened to the helmet and a pocket transmitter.

It has been reported in the American press that the AN/PRC-88 radio set was finally deemed to be of inadequate power and complex design. These were the reasons given for the fact that it often broke down in battle and could not support communication adequately in jungles. A decision was made on the basis of combat experience in Vietnam to simplify the set's design so that in the event it broke down, faulty modules could be replaced on the battlefield, rather than having to send it out for repairs. An additional power amplifier has been developed, tested, and introduced into the troops for work in jungles or forests. Owing to this, communication on open terrain

can reach a range of up to 15 km. The overall dimensions of the helmet receiver were reduced to the size of a cigarette pack.

The American Army now uses the AN/PRC-77 miniature radio set weighing about 6 kg for ranges from 2 to 8 km. It is asserted that it has been adapted for secure voice transmission and, when necessary, it is supplied with an additional amplifier block permitting longer range.

It is believed that the radio sets described above can almost completely support radio communication in an infantry company. Other radio sets have been designed for the company, battalion, brigade, and division levels. They differ basically only in standard equipment and communication range. Attempts at using the so-called modular design principle are being made more and more often. This design is based on general-purpose standard blocks. The required characteristics of the apparatus are obtained by selecting different combinations of the types and quantities of such blocks. As an example there are plans in the USA to create 13 standard blocks (modules) for UKV radio apparatus, out of which any radio set in this range could be built in the future.

Short-wave radio sets providing secure voice transmission are used abroad for direct communication at ranges beyond 30 km. These are mainly the American AN/GRC-142 and AN/VSC-2.3 radio sets. They can be used for printed communication. Meanwhile the AN-GRC-106 set is intended for operation with a radio-telephone.

However, it is believed abroad that KV radio communication does not provide the needed quantity of channels at ranges greater than 30 km. For this reason the USA and Japan foresee multichannel radio relay lines to expand the potential of the tactical communication network. For example three vehicular (0.25 tons) AN/GRC-103 radio relay sets having 6-12 telephone channels are usually allocated to an American infantry brigade for communication with the division and battalion operating on the main axis.

Line communication enjoys limited application at the tactical level in foreign armies. It is used basically as a back-up for radio communication and insures covertness of control at places of permanent or long-term troop deployment. In other words line communication cables are laid only when there is enough time to deploy such apparatus beforehand. But during combat activities the American Army, as an example, foresees "disposable cables," which are left in place after their usefulness ends.

We can judge from press reports that radio communication resources make up the foundation of battle control systems at the company level abroad. It is precisely to their improvement and modernization that NATO countries devote much attention.

[27 Jan 77, p 3]

[Text] 2. At the Operational Level

The need for communication channels and the demands imposed on their quality, which have increased considerably in the last 20 years, have produced a situation in which the total number of radio sets in the troops has increased by dozens of times. For example this number reached about 80,000 in the American field army in 1970. As a result communication centers have transformed into highly complex systems of technical resources that are cumbersome and poorly maneuverable. Moreover it has been found that when the concentration of radio resources is high, joint operation of these resources is significantly encumbered. Intense mutual interference is produced, with which specialists did not have to deal before. Thus a very serious problem arose, which has come to be called electromagnetic compatibility of radio resources.

It was at first assumed abroad that there would be no special difficulties in solving the problem of joint operation of radio resources in the presence of oversaturated air space. It was believed that it would be enough to place use of operating frequencies in order, monitor selection of bands for different types of electronic resources more strictly and, finally, turn attention to suppressing spurious electromagnetic oscillations arising when different types of electronic devices operate together. As an example all of these tasks were assigned in the USA to the Center for Analysis of Electromagnetic Compatibility, specially instituted in 1961.

The years passed. The center came up with a huge number of versions for distributing radio resources with a consideration for the specific features of their mutual influence, and it studied the ways and means for reducing mutual interference of resources operating jointly.

However, foreign specialists note that they have not yet been able to fundamentally solve the problem of electromagnetic compatibility of field radio resources. This is why, American specialists believe as an example, the time has come to review the former point of view on supplying radio communication resources to the troops with an eye on reducing their total number and types.

This raises the following question: How can this be done without detriment to the continually growing demand for communication? American specialists are placing their hopes on more-sensible distribution of communication resources and their integrated use. They say that general-purpose sets are needed, which could support communication in the KV and UKV ranges, moreover the same ones for infantry, artillery, aviation, the navy, and other branches of troops.

These are precisely the prerequisites satisfied by the AN/PRC-70 set presently being developed in the USA. It foresees electronic tuning and digital methods

for frequency synthesis. The hope is that the set's overall dimensions and weight could be reduced, tuning precision could be increased, and the speed with which the set could be tuned to a given frequency could be accelerated in this way. Separate small receivers and powerful amplifiers which can be included in the set outfit as necessary have also been proposed as a supplement to the general-purpose radio sets.

All of these measures will probably permit a certain reduction in mutual interference; however, the foreign press emphasizes, they would be unable to solve the entire compatibility problem because they cannot produce the necessary dispersal of radio resources in the troop zone of activity. For this reason American military specialists proposed a new way for structuring a united communication system, the communication "net." What is this?

A net of regional communication centers connected together by multichannel radio relay stations and, sometimes, line communication cables with a capacity from 24 to 96 telephone channels is deployed in the troop locations and possible areas of redeployment. The control posts of troops participating in a joint operation are connected to the "regional communication" centers.

What are the advantages of such a communication system? First of all, it is believed abroad, it significantly heightens the stability and viability of communication because if some of the regional centers are put out of action it would not be difficult to provide communication support with centers remaining operable.

Secondly such a communication net heightens the covertness of the control system, since the radio communication resources are distributed almost uniformly throughout the entire zone of troop combat activities. Meanwhile when radio resources are deployed only at control posts, this circumstance alone goes a long way in revealing the control system, making it easier for the enemy to influence it.

In the third place the mobility of control post communication centers rises significantly in the presence of a "net." After all, only a minimum quantity of resources, required for connection to one or several (to heighten communication stability) regional centers, is kept at the control posts.

However, the "regional communication" system is not at all free of shortcomings in "pure" form. In the opinion of foreign specialists it takes a great deal of time to set up a branched system, and large quantities of forces and resources are required. It is difficult to make regional communication centers maneuverable enough to permit their deployment in new regions as the situation changes.

In short, it is believed abroad that the new method for organizing communication in the troops is unable to fully eliminate the need for direct multi-channel communication lines between commanders and their staffs. For this

reason an especially important role is attached to use of AN/TSC-80 space communication stations and AN/GRC-143 and AN/TRC-112 tropospheric stations.

Foreign specialists believe today that only a system that is branched, united, and automated to the maximum can satisfy today's extremely high demands for troop communication. Thus it is no wonder that the USA, Canada, England, and Australia had attempted to unite their efforts to create such a communication system jointly as long ago as in the late 1960's. A plan of the Mallard automated communication system servicing all levels of control from the battalion to the army was even developed. However, scientific research and discussion of the principles for designing the system went no further because of the outlays, estimated in the billions, necessary for implementation of the entire project.

And so, summarizing this brief examination of the level of development of radio communication resources at the operational level achieved abroad, we can note that specialists face many difficult scientific-technical problems. To what extent they could be overcome, only the future will tell. But one thing is clear: Rapid progress in science and technology can contribute the most unexpected changes, opening new paths for improvement of communication resources and imparting new properties and capabilities to them.

[28 Jan 77, p 3]

[Text] From Outer Space to the Depths of the Sea

The prospects of improving radio communication resources are associated abroad chiefly with a rise in the level of automation and an increase in the potential for their integrated use, their viability, and their resistance to interference. Extensive introduction of space resources is believed to be the most preferable and effective way. Foreign specialists note that this path has been justified by progress in improving the strategic communication system intended for the armed forces of the USA and other NATO countries. Terrestrial stations have been built which provide multichannel communication with the needed regions through communication satellites. However, a number of difficulties have been encountered in developing such stations for the operational and tactical levels of control. The time to achieve mass production of space communication resources has not met the plans. What is the problem?

It has been reported that the main difficulties arose in development of a small antenna and a small transceiver. Naturally, the retransmitting satellite had to assume a more complex design so that the size of the antenna could be decreased and the design of the terrestrial station's transceiver could be simplified with the purpose of heightening its mobility. This approach was found to be unacceptable at first: The satellite turned out to be too expensive. But after a while it was nevertheless deemed suitable to take precisely this approach because, after all, every satellite could service numerous terrestrial stations. It was not until this time that models of space communication stations operating in the multichannel mode,

recognized to be suitable for broad introduction into the troops, appeared in the USA. Such stations include the portable AN/TRC-156 and AN/TSC-80, and the AN/MSC-57 vehicular station.

Now, the foreign press reports, development of such stations to support multichannel space communication in the zone of troop combat activities is imminent. The reference is to the AN/MSC-59, AN/TSC-85, and AN/TSC-86 transportable multichannel stations. The plan is to include them in the composition of communication centers to support "regional communication," and to use them during halts by troops and staffs on the move.

It is asserted that each of these stations insures secrecy of voice and digital information transmission. Change in operating mode in response to intense jamming with the purpose of retaining acceptable communication quality is foreseen. The design employs a parabolic antenna with a reflector diameter of 2.4 meters and an automatic satellite tracking system.

The results of experimental operation and testing of the stations described above lead foreign specialists to the conclusion that they would satisfy the requirements of modern battle the most fully and could enjoy application at control levels from the battalion to the army corps inclusively. They are noted to be compact, simple, and easy to maintain. An area need not be selected and prepared for their deployment, and for this reason they can be redeployed quickly.

Foreign specialists assert that although the UKV range is used in space communication, direct visibility between the station antennas is not required. Communication is achieved through a satellite which is high above the horizon as a rule. This also means a reduction in the number of maintenance personnel as compared, for example, with radio relay and tropospheric lines. After all, space radio lines do not need manned intermediate stations. Space communication channels satisfy standard requirements, and for this reason there are no difficulties in mating them and using them with other communication resources in the battle zone.

It is believed abroad that extensive introduction of modern space communication resources would sharply heighten communication quality and the mobility of communication centers, and it would facilitate solution of the problems of electromagnetic compatibility and combination of communication nets at the operational and tactical levels of control. A single multichannel space station operating in several directions can replace a large number of stations with few channels. Inasmuch as such stations have standard telephone channels or use discrete digital outputs, it is easy to mate them when communication nets are combined. It is assumed that all tactical control units could be included in the strategic communication system for this reason. As a rule the antennas of the terrestrial stations are directed vertically upward and have a narrow polar diagram, making it easier to eliminate mutual interference during joint operation.

However, foreign specialists see good prospects not only in space communication resources. As an example to heighten the traffic capacity at short and medium range (up to 100 km), they place certain hopes, besides on space lines, on waveguide, laser, and light guide communication lines. Their development and testing is going on at full throttle. Thus it is reported in the press that a way has been found to manufacture sufficiently inexpensive light guide cables which can be used successfully to support internal communication at control posts, on ships, in airplanes, and in other objects. Owing to their high traffic capacity, such lines can be used to exchange visual information by means of so-called "secure" digital television. It has been reported that introduction of such television would considerably reduce the time required to process and display graphical information and other documents.

One of the most complex problems from the standpoint of insuring the viability of communication is believed, in the USA, to be in submarine control. Cumbersome antenna structures and superlong-wave (SDV) transmitting centers are used for communication with submarines. The U.S. Department of the Navy has recently been hastening development of resources by which to communicate with submarines at great depths and ranges. The emphasis here is on creating small SDV radio sets mounted aboard retransmitting airplanes, ships, and ground transportation resources. It has also been reported that research has been going on in the (Sangvin) project with the purpose of creating a protected underground transmitting center providing communication with submarines at great depths at frequencies below 100 Hz. There are also plans for placing SDV equipment aboard a special satellite.

These, in the opinion of foreign specialists, are the principal prospects for development of radio communication resources in the next few years. They are the product of a desire to achieve maximum standardization and unification of communication equipment, and more flexible and fuller use of this equipment in troop and fire control.

Photographs [not included in translation] (left to right): Multichannel stations installed on light vehicles (AN/TSC-85), on the ground (AN-MSC-59), and trucks (AN/TSC-86).

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CIVIL DEFENSE TRAINING OF VOLUNTEER MEDICAL SQUADS REVEALS SUPPLY SHORTAGES

Moscow KRASNAYA ZVEZDA in Russian 5 Feb 77 p 2

[Article by Colonel of the Reserve V. Arkhipov: "Volunteer Medical Squads"]

[Text] Vladimir--Any undertaking is set in motion by enthusiasts. One is convinced of this for the umpteenth time when one familiarizes oneself with Vladimir's "Elektropribor" Plant and with the activity of the volunteer medical squads which have been created within the civil defense system.

The volunteer medical squads here are famous for their state of organization. The female enthusiasts have succeeded in proving to the plant's workers that mastery of basic medical knowledge and methods of rendering first-aid should be the concern of each and everyone. For it is not only in some emergency or other that the skills that are acquired during classes are needed; the ability to stanch the bleeding, to apply a splint, and to help a person who has sustained burns--all this is necessary in everyday life.

Anything can happen at a plant. When the shops had no volunteer medical squads, the worker went to the general out-patient center for a trifling scratch. Now right in the shop any female volunteer medic dresses the wound, applies iodine, and skillfully bandages it. The shop pharmacy has bandages, iodine, tourniquets, and splints.

Women put a particularly high value on basic medical knowledge and skills because they are also of great benefit domestically. For almost all of them have children. However well they are looked after, there is no guarding against scratches, burns, and other nuisances. First-aid rendered in good time in the home sometimes protects the child against a prolonged illness. There are sometimes more serious cases. Lyudmila Murzhukhina arrived home from the plant one day to find her daughter crying out--she had been bounding around carelessly and had dislocated her foot. Should she run for the doctor? What time it would take! Lyudmila Grigor'yevna remembered how at the classes the surgeon had instructed them in righting a dislocation. She plucked up courage and set about it herself. Afterward, of course, she took her daughter to the doctor, and he praised the volunteer medic for her decisiveness and competence.

Yes, the women are instructed in very necessary work in the volunteer medical squads!

The civil defense medical unit at "Elektropribor" is headed by Rimma Mikhaylovna Kas'yanova, chief doctor of the plant's general out-patient clinic. The students at her lectures are enthralled by her knowledge of therapeutics and her ability to illustrate intricate theoretical propositions with examples taken from the practice of the plant's general out-patient clinic. The surgeon Aleksey Alekseyevich Parkin holds classes on the diagnosis and treatment of breaks. The female volunteer medics reinforce the knowledge acquired during the doctors' lectures in practice. And here a primary role is played by the nurses Anna Iosifovna Tatarinova and Aleksandra Nikolayevna Bochenkova. They show clearly how to dress a wound and fix a splint, halt the bleeding with the help of a tourniquet, and how to render first-aid to someone suffering from burns, poisoning, and frostbite. Persistent and prolonged simulation drills unflinchingly follow the demonstration.

During the practical exercises, of course, it is a question of doing more than talking. But sometimes conversation strikes up of its own accord, particularly at Anna Iosifovna Tatarinova's lessons. The point being that she was at the front. She served in the evacuation hospital of the 11th Guard's Army, which operated at Koenigsberg. The very young nurse Anya Tatarinova arrived at the front in 1945. There were heavy battles to eliminate the enemy's East Prussian grouping. There were many wounded. The hospital personnel worked without respite. And now the volunteer female medics again and again ask Anna Tatarinova, junior lieutenant of the reserve medical service: was it terrible during the war? Did you have to dress wounds under bombing and shelling? What were considered severe wounds and how long did their treatment take?

Anna Iosifovna tries to answer the questions as thoroughly as possible, citing examples and cases, of which practice at the front left many to the memory. It was not easy for the orderlies and nurses when they encountered head-on for the first time the severe sufferings caused people by war. But they strove to take themselves in hand, keep cool, and always be ready to do their duty--alleviate people's suffering.

Success in the instruction of the female volunteer medic is achieved by the well-considered organization of the classes. Enrollment in the volunteer squad follows an order from the plant director. The classes are held strictly according to schedule. The classrooms are supplied with everything necessary--training posters and diagrams, instruments, and materials. The attendance rate is almost 100 percent. The female volunteers assemble readily, without the need for special reminders. And, perhaps, there are few people who would realize what difficulties R. Kas'yanova has in compiling the schedule. For a plant is a plant, and for it the basis of everything is production. It is difficult to divert people from their jobs.

Nevertheless, the lessons cannot be held in fits and starts and in abbreviated form. Here there have to be negotiations with the shop chiefs, and a time has to be chosen which does not harm production and bunch up the female volunteers' instruction.

The plant's female volunteers actively participate in competitions--intra-plant, rayon, and oblast. And the volunteer squad headed by Galina Ivanovna Khazova even participated in competitions of the non-Chernozem Center oblasts and took a prize-winning position there. The "Elektropribor" has a crystal bowl to commemorate this event. Winning it was not easy. For this it was necessary to promptly and precisely render assistance in "the center of a nuclear strike," evacuate the "wounded" without any unnecessary fuss, display an ability to apply splints at the point of breaks, perform bandaging, and, finally, in full gear and gas masks, pass in front of the tribunal jury and demonstrate impeccable military bearing.

The plant Red Cross Committee and its chairman, Antonina Vasil'yevna Fedotova, participate actively in the preparation for competitions and the organization of the teams.

The plant board of directors and community value the labor of the female volunteer medics and support them in every way. The winners are not only encouraged by thanks in an order and the hanging of their pictures on the Board of Honor, which is in itself very important; motorbus excursions to Moscow, Leningrad, Gor'kiy, and Yaroslavl' are organized for them. Passes for the "Vladimirets" tourist train are also purchased for them.

The level of a team's material supply figures as an important indicator during quality competitions. Judging by competition results, things are seemingly in good shape at "Elektropribor" in this respect. But far from everything. Only textbooks, visual aids, and certain instruments are received in centralized fashion, via the Red Cross Society. All the rest has to be obtained locally. The shops sew medical packs, bandages are made from gauze, and stretchers are made. But not everything can be made on the spot. For example, there is a shortage of thermometers and no absorbent cotton. Sometimes it is difficult to find in the trade network suitable scissors, knives, and other items essential for instructing the female volunteers.

Incidentally, money is provided for the study center equipment, but buying the necessary gear is not always that simple. In this connection the question naturally arises: is it not time for the Red Cross committees and the civil defense staffs to give more thought to the system of material provision of the study centers and classes? It is a worthwhile matter, and the efforts expended on it will be repaid a hundredfold.

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