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THE PEIPING ELECTRONIC TUBE FACTORY

AND THE

MUKDEN ALUMINUM-MAGNESIUM DESIGN INSTITUTE

- COMMUNIST CHINA -

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[The following are translations of selected articles from various issues of the Peiping Kung-jen Jih-pao and Jen-min Jih-pao.]

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PEIPING ELECTRONIC TUBE FACTORY PROMOTES MASSES TO PREPARE FOR 1960 PRODUCTION

[Following is the translation of a news report written by Mu Tao, in Kung-jen Jih-pao, Peiping, 20 December 1959, page 1.]

Having attained an all-out fulfillment of the 1959 State plan ahead of schedule, the Peiping Electronic Tube Factory has devised a slogan, "This year red to the end; next year red from the start", has continued to promote the masses for a technical revolution and a technical reform, on the one hand, striving for the fulfillment of the activities under the 1959 leap forward plan, and on the other hand, making preparations for 1960's production activities.

After repeated discussions and consideration, this factory has now formally determined what will be the 1960 production task. The 1960 production plan is greater than that of 1959 and the task for the first quarter of 1960 is much higher than that of the fourth quarter. The Party Committee of this factory and the factory management, with the spirit of the general line and the continuous great leap forward, under the premise of guaranteeing high production, superior quality, complete sets, climbing high peaks, many varieties, low production cost and safe production, from the top to the bottom, have promoted every level to mobilize, every level to discuss, every level to keep detailed accounts, and every level to adopt measures and make careful arrangement for the 1960 production task.

In accordance with the needs of the situation under the great leap forward, some electronic tube products have been greatly revised and the principal problems confronting the whole factory in 1960 production have been ascertained. Tentatively speaking, these problems concern the chemical sub-plant and the tool parts sub-plant. Owing to the changes in the product varieties, the production of some parts must be greatly increased. For instance, indirectly heated filaments must be increased three times the amount in the original plan for the annual production and indirectly heated cathodes must be increased four times the amount in the original plan

for annual production. The great number of moulds and equipment for the production of electronic tube envelopes must also be correspondingly increased.

Following changes in product varieties, equipment and labor force must be relatively increased. The factory management has organized all related departments, promoted the communist cooperative spirit and strongly supported the various items of technical revolution. For example, the equipment manufacturing sub-plant has contributed support in manpower and parts for the improvement and re-installation of equipment. Other sub-plants have also volunteered support, so that the 1960 production plan has now become definitely settled, ensuring that the whole factory will start 1960 with red.

With regard to the 1960 production plan, every workshop, every group, every procedure and even every worker, in accordance with their concrete tasks, have all begun to keep detailed accounts and adopt measures to fulfill the plan. For illustration, the tungsten-molybdenum sub-plant's task to manufacture tungsten-molybdenum filaments in the first quarter of 1960 will surpass the plan's annual production capacity by 360%; such a task is very exacting. Each sub-plant leads its cadres to accept the State plan with determination. Each has begun to strive for daily progress, production output, qualified standard products and the promotion of technical reforms. The leaders in the sub-plant and workshops have given personal assistance to the small groups to arrange their tasks.

In making preparations for 1960, this factory also held fast to equipment maintenance and repair and even preliminary repair. The factory management has requested every unit, on the basis of the 1959 mass movement for equipment inspection and repair, to summarize all the experiences acquired so far and to adopt the method of coordinating the operators, the repair workers and the mechanics, so that there would be no "sick" machine greeting the new year. The old mechanics in No. 405 Workshop of the receiving amplifier sub-plant are now making extensive preparations for inspection and repair activities at the end of the month and before the arrival of the new year. They have guaranteed that all inspection and repair work will be completed before the other workers come to work after the new year. In order to do a good job in equipment maintenance, repair and safe production activities, the chemical sub-plant has started a mass movement competition.

In addition, the supply department has already prepared most of the materials needed in the first quarter of

1960. Now there are still eight problems left but everybody is doing his utmost to overcome them. Cooperation has been established with sister factories, on the one hand, to manufacture the parts that are needed and special men are sent to bring back the parts as soon as they are finished; on the other hand, the various units in the factory have tried to manufacture the parts themselves with whatever materials available or tried to use substitutes. All production units have also put great efforts in storage activities for semi-finished products.

REFORM ACHIEVEMENTS IN PEIPING ELECTRONIC TUBE FACTORY

[Following is the translation of a news report in Kung-jen Jih-pao, Peiping, 22 December 1959, page 1.]

Under the Party Committee's guidance, the workers of the Peiping Electronic Tube Factory have firmly promoted a mass movement, technical reforms, and a technical revolution, and have guaranteed the production plan with a month-to-month red, quarter-to-quarter rising, and year-to-year leap. According to statistics from the latter part of October to 10 December, the whole factory succeeded in making 2,300 technical reforms, of which more than 600 items have solved important production problems. Since the beginning of 1959, this factory has over-fulfilled the goals of the State plan every month.

The content of this factory's technical reform and technical revolution is very rich and its scope is very broad. Every one has some inventions, every procedure has improvements, and everywhere there are reforms. Those units that have big production tasks, through technical reforms, are able to overcome obstacles, while those units that have lesser production tasks are also promoting technical reforms to raise their productive capacity and to prepare conditions for the future continuous great leap forward.

In all items of technical reforms, those belonging to the improvement of equipment and techniques constitute a greater proportion. After equipment and techniques are improved, not only are the workers liberated from heavy physical labor and the degree of strenuousness in labor reduced,

but also production efficiency rises from several times to several tens of times. For instance, in the tool parts sub-plant, one of five difficult problems is that, in the past, it was very difficult for the sub-plant to fulfill its task each month in the production of electronic tube anodes. Had it not been for the promotion of technical reforms, there would have been no guarantee for the continuance of a great leap forward in 1960.

This sub-plant adopted the three coordination method to overcome this obstacle. A technician, Wang Shou-hua, first planned to shift moulds from the base plate onto the automatic machine, rendering a complete change in the structure of moulds; together with the workers, he made repeated experiments, one procedure after another, for three days and three nights, testing and inspecting and finally succeeded in the experiment. Originally, when the moulds were on the base plate, the manufacture of the electronic tube anodes required five procedures for completion, but now, the moulds are on the automatic machine, only one procedure is sufficient for the completion of the manufacturing process, efficiency has risen 14 times, and the scrap rate has been reduced to 2%.

In the tungsten-molybdenum subplant, the difficulty was that the four pipes from the tungsten furnace could not give balanced production. The workers, with the spirit of dare to think and dare to act, added another compartment with two more pipes to the furnace, making a furnace with three compartments and six pipes. Production was increased by 50% and guaranteed good quality, meeting the needs in the next procedure of work and also overcoming the shortage of equipment and space.

In the glass sub-plant, the cutting of the glass tubes and sorting into different classes, in the past, were done by manual operation. Since these two procedures were changed to automatically done by machines, the degree of physical toiling was reduced and labor force was also economized. Each shift of workers was reduced from the eight-man team to the now two-man team; in a three-shift day, a labor force of 18 men was economized.

In some units where equipment could not be improved, the workers actively tried to improve techniques and acquired good results. For instance, when the direct heated small tube workshop was processing the closing of tube ends it used three oxy-acetylene flames. Though the [closing] time was very short, the flames were concentrated on the ends and they caused serious oxidization to the leads. Cleaning the leads involved much trouble. Generally, it

required 10 to 15 minutes to clean 50 leads. But to evacuate the air from the tube as the next procedure required only four minutes to complete 50 tubes, so the lead cleaning process cannot catch up with the air evacuating process, thus there is a great number of tubes waiting for cleaning, seriously affecting the regular flow of operation and the fulfilling of the production task. This workshop started to improve its techniques. It changed the three flames to four flames, diminished the flame intensity and at the same time, increased the distance between the two flames. In preliminary heating, they avoided the burning of leads. Thus, the degree of lead oxidization was greatly reduced and the time required for cleaning was reduced from 10-15 minutes to 3-4 minutes. Since then, there has been no more tubes waiting for cleaning and the production flow has resumed its regular course. The obstacle to a continuous great leap forward was overcome.

In this movement, many units attained improvements through coordination of the actual conditions in the subplant or workshop with technical reforms. For example, a workshop promoted a technical reform with the hope of securing "great area results". The method was: first, in each operation of a procedure, each worker was required to summarize his own work method, then, all the workers doing the same operation got together, with each reporting his own experiences. Finally, all came to the conclusion which was the better method, which was faster and turned out better quality products and that one was established as the model method for everybody to learn. In addition, organized tours were organized to see what methods other units were using. After each tour, a discussion was held to adopt good points and to raise common efficiency.

Secondly, after each procedure had created new experiences, the Party Branch in the workshop attested the experiences as good, and then, these were promoted throughout the workshop. In such a way, the entire workshop was aroused to a high tide for technical reforms. At present, the frame-making workshop is in such a high tide that its efficiency has risen 10% while its scrap products have been generally lowered. The other units, based on their own conditions, have also promoted technical reforms.

As to material supplies for electronic tubes, many units, under the premise of technical reforms and guaranteed quality, have put great efforts in the economy of materials, used substitutes, and utilized left-over materials to make small parts. These methods have enabled them to achieve great results and to solve material shortage problems. For

example, the diamonds used in the diamond dies for the drawing of tungsten-molybdenum filaments were all imported in the past and their price was very high. The tungsten-molybdenum sub-plant, in cooperation with the central experimental laboratory and with the old [experienced] technicians, tried the boring of holes with oxygen and hydrogen instead of manual drilling. During this experiment the assistance of a Soviet expert was obtained, and now that the experiment is successful, the diamond shortage problem has also been solved.

At present, this factory's technical reform movement is making a further step toward another new high tide. Each sub-plant and each workshop, based on its own production task and the production conditions for the 1960 continuous great leap forward, has outlined its future technical problems and listed them with the other production measures in the plan, so that arrangements can be made to overcome the difficulties confronting production. Those methods that have been proved successful are to be applied in production and within the factory, a vigorous movement has been promoted to expand advanced experiences.

A MESSAGE FROM THE PEIPING ELECTRONIC TUBE FACTORY WORKERS

[Following is the translation of the message in Kung-jen Jih-pao, Peiping, 24 December 1959, page 1.]

We have faithfully responded to the Party's call, guaranteed an all-out fulfillment of the 1959 leap forward plan and guarantee to begin with red and end with red in 1960. In order to advance together with the sister factories throughout the country and to learn better from the sister factories in the various areas, we offer to them the following suggestions:

In 1960, we must raise higher the red flag of the general line and Mao Tse-tung ideology. Under the guidance of the First Ministry of Machine Industry and the Peiping City Party Committee, we support the Party in the continued assumption of political prominence, to promote a mass movement, to implement the spirit of constant revolution, to arouse still greater morale, to strive for the upper reaches, to have great ambitions, to make strong determinations, to reach the apex, to climb high peaks, and to implement the policy of superior quality, high production, complete sets, many varieties, low consumption and safe production, ensuring "month-to-month red, quarter-to-quarter rising, year-to-year leaping" and striving for the realization of a greater, better and more all-out leap forward in 1960.

Our goals are to ensure that the 1960 total value of industrial production, as compared to the fulfilled value of the 1959 plan, will increase 42%; that the value of commercial goods production will increase 47%, that of principal products 36%, product variety will increase 41%, labor efficiency will rise 40%, production cost of comparable goods will be reduced 10%, and that product quality will be steady; to guarantee in the first quarter of 1960 the total value of industrial production, as compared to the fulfilled value of the plan for the fourth quarter of 1959, will increase 18%, the value of commercial goods will increase 16%, principal products output will increase 10%, labor efficiency will rise 18%, production cost will be lowered 5%,

product variety will maintain a 100% record and to ensure the delivery of goods in accordance with the contract.

In order to fulfill the above goals: First, we must continue to penetrate into the mass movement for increased production and economy that has technical revolution and technical reforms as its main objectives. The technical revolution and technical reforms movement must fully utilize the method of coordinating leading cadres, technicians and workers. On the one hand, attention must be given to the weak links in production and to bring about improvements according to plan. In 1960, we shall try to substitute some manual operation with mechanization and to establish three automatic or semi-automatic production assembly lines. In the field of manufacturing dies and tools, we shall strive for the standardization of 80% of the dies and tools and for the uniform production of 85% of the dies and tools. On the other hand, we shall promote a wide-spread mass movement to attack production problems and to foster a technical revolution and technical reforms. The masses' advanced technical experiences and the successful reform items must be rapidly approved and those that should be incorporated into the regulations must be done as soon as possible.

Socialist labor competition movements must be broadly and deeply promoted, encouraging the workers to compare with the advanced, to learn from the advanced, to catch up with the advanced, and to help the backward, so that all the workers will be constantly advancing and jointly rising to an all-out leap forward.

Secondly, we must strengthen control work over the enterprises, continue to implement the method of coordinating centralized leadership and decentralized control and coordinating specialized control and mass control and to promote a mass movement so that the workers will attain a higher level in their control activities. Before the end of 1959, production activities for the first quarter of 1960 must be fully prepared. We must announce quarterly goals 20 days ahead of time, and monthly goals 10 days ahead of time. We firmly adhere to the 10-day and daily inspection plan, to guarantee the annual, quarterly, and monthly balanced fulfillment of plans so that production will rise step by step.

Thirdly, in the field of equipment preliminary repairs, we must make preliminary inspections and repairs according to plan and keep in reserve the necessary equipment and parts. In the aspect of safe production, we must make regular investigations of conditions with regard to the enforcement of safe production attitudes and regulations to insure safe production, under which no great bodily or

property damage may be incurred.

Fourthly, in order to strengthen the workers' educational activities, we must arouse the mass movement for the learning of political theories, culture and technology to a new high tide. We insist that the cadres must be well learned in theories and that the workers' socialist education must be strengthened. By the "walking on two legs" method of using off-hour learning as the main factor, together with non-production learning, at least 80% of the workers in the factory must be organized to participate in various cultural learning. The number of workers enrolling in technical high schools and colleges during their off-hours in 1960, based on the number in 1959, will increase 50%. We shall strive for the fulfillment of tasks in completely eradicating illiteracy.

Fifthly, we firmly implement the policy of holding fast to production on the one hand and adjusting living conditions on the other. We must give attention to the good coordination of labor and leisure, so that after a day of hard work, comrades will have full rest and be able to participate in various cultural and athletic activities. Control improvements must be brought to the dining halls and dormitories and great efforts must be put to health activities. Try to operate the dining halls with mechanization so that more pigs, chickens and ducks can be raised to enable the comrades to have better food and better sleeping quarters. We shall promote a wide-spread mass movement in athletic activities, and with the exception of pregnant women and the sick, over 95% of the workers must participate in athletic training and at least 70% of total number of workers in the factory must participate in the system of labor and health training. On the universal basis, the level of the athletes must be raised.

We are confident that under the brilliance of the Party's general line and under the guidance of the First Ministry of Machine Industry, the Peiping City Party Committee and the factory Party Committee, we, being modest and diligent, and trying not to be too proud, shall be able, on the basis of the continuous great leap forward in 1959, to realize a greater, better and more all-out leap forward in the year of 1960.

PRODUCTIVE EFFICIENCY RISES RAPIDLY IN ELECTRONIC TUBE FACTORY

[Following is the translation of a news report written by Kuan Yao-tsung in Kung-jen Jih-pao, Peiping, 21 November 1959, page 1.]

The advanced collective body, the Peiping Electronic Tube Factory, participating in the all-China heroes conference, has actively responded to the conference's appeal for the promotion of technical reforms and a technical revolution and has rapidly aroused a new high tide in the vigorous mass movement for increased production and economy. In November, this factory made many attacks and gained many victories. By 16 November, this factory had already fulfilled 91.4% of the value of the monthly plan for production and fulfilled 66.4% of the monthly production output plan. In the first half of the month, the workers offered 10,818 reasonable suggestions. At present, 990 items have been applied, and among these, 321 items are reforms that have overcome important production difficulties, thus, productive efficiency rose rapidly.

In these technical reforms and the technical revolution, this factory created some automatic and semi-automatic equipment and actively transformed the appearance of certain production procedures. The leaders in the chemical sub-plant held fast to this link, pointed the spearhead of technical reforms toward the transormation of manual operation into mechanization, and promoted the workers to adopt the method of three coordinations with the aim to "swallow the bones". At the cleansing unit in this sub-plant, when cleansing electronic tube cathode plates, the workers previously used cotton and alcohol for rubbing the plates. Each worker at the most could clean only 1,600 plates, so production efficiency was very low; when there were numerous parts, the workers often had to ask for help, and sometimes even with such help they still could not fulfill their tasks. Recently, with the assistance of technicians, a machine was used to substitute for manual operations. The parts and saw-dust are put into the machine where they undergo a rolling

process. Within 20 minutes, the machine can clean over 2,000 plates. This method not only has raised production efficiency but at the same time has liberated quite a number of workers from the task.

In the all-factory movement for technical reforms and technical revolution, leaders, technicians and workers have organized shock troops which have gained great results. These shock troops, in cooperation with the masses, mainly attacked the most important problems. In the large and medium tube sub-plant, 21 shock troops were established. Every troop offered suggestions and carried out reforms. In the first part of November, these troops and the workers jointly made over 420 reasonable suggestions, of which 69 items have been already carried out. In the 406 workshop of the tungsten-molybdenum sub-plant, having overcome the difficulty of inadequate tensils strength of the 8 micrometers diameter gold-plated tungsten filament, the workers have attained a finished product rate, which rose from the original 20% to 80%.

Recently, this factory called a workers' delegates conference, appealing to all workers in the factory to penetrate deeper and more precisely for the increase production economy movement. Through technical reforms and the technical revolution, each production group in the whole factory has raised its productive efficiency by 35%, with the advanced becoming more advanced and creating more outstanding production achievements.

PEIPING ELECTRONIC TUBE FACTORY STARTS WITH RED

[Following is the translation of a new report in Kung-jen Jih-pao, 3 January 1960, page 2.]

The "hero" factory, the Peiping Electronic Tube Factory, has challenged sister factories throughout the country to a competition and has victoriously entered the year of 1960. Today, work has begun and one day's production has over-fulfilled the goal of the daily plan; thus it has realized its hope of starting with red. Now, the factory has expressed the ambition of attaining day-to-day red, month-to-month rising, quarter-to-quarter leaping and red throughout.

According to statistics, today's actual production output for the whole factory over-fulfilled the goal of the daily plan by 110%, and compared with the daily production output average for the last 12 months, this is an increase of 19%. Daily production value reached 135%, and compared with the daily production value average for the last 12 months, this has increased 13%; variety production has reached 100%, workers' attendance 100% and there has been no accidents of any kind.

In the early morning today, the Party Committee members, Party Secretary and the factory manager, personally beating drums and gongs at the entrance to the factory, received the production workers, congratulating them on the first day of the year for their successful production and starting with red. The workers were greatly encouraged and they all guaranteed to the Party that they would do their best to make a good start. They are high in morale and spirit. They aroused a high tide for the competition of striving for a good starting red.

The chemical sub-plant originally was the weakest link in the whole factory. Owing to the changes in products, production output could not meet the needs of production. In order to guarantee the starting of the year with red, the workers of the sub-plant gave up their New Year holiday and organized 10 shock troops. Even on New Year's day, they all went back to the plant for "shock" production and prepared enough parts for production to ensure the start of the year with red.

Today, every unit in the factory reported good news and production in every sub-plant attained new records. Pan Fang-yun and Chang Min in the heating filament workshop started a competition on the production flow line. In the past, these two workers each had a daily production output of 12,000 filaments. Today, when they started the competition, they both strived to surpass the norm. As the result, Pan Fang-yun produced 21,000 filaments, while Chang Min produced 22,000, creating the highest daily production output record. Many workers promoted technical reforms, repeatedly surpassing the norms. According to statistics, more than 70% of the workers of the whole factory have surpassed today's production norm. Chang Min-jo, a planer in the tungsten-molybdenum workshop, when he was making clippers for the manufacture of extra-small size envelopes, changed the individual operation into a mass operation method, thus increasing production efficiency three times. Following this, another planer, made a further improvement on Chang Min-jo's method and again raised production efficiency three more times.

Today's starting with red has created a favorable situation for the whole year's production. Now, the Party Committee has coined another very ringing slogan, "One fast step makes every step fast", requesting all workers in the entire factory to attain day-to-day red, month-to-month rising, quarter-to-quarter leaping and red to the end. Because product variety has increased in this year's production, the factory has prepared to launch a mass movement for increased production and economy, with technical reforms and a technical revolution as its main goals, to strengthen the weak links in its production by planning to substitute manual operation with mechanization and by the establishment of three automatic or semi-automatic assembly lines.

At the same time, the factory has established a "day-to-day" banner movement and is promoting a new tide in competition. The plan must be announced 10 days before its application. There must be goals set up for every 10 days, a measure for each week, auditing and inspection for every day, so that new regulations will be established for a steady rise in production.

PEIPING ELECTRONIC TUBE FACTORY WORKERS ASSIST AGRICULTURE DURING NEW YEAR'S VACATION

[Following is the translation of a news report in Kung-jen Jih-pao, Peiping, 23 January 1960, page 2.]

Recently, the Party Committee of the Peiping Electronic Tube Factory gave to the entire body of workers in the factory a penetrating educational campaign concerning the alliance between the working class and the peasantry, requesting all those who were going to return to the rural areas to visit their relatives during the New Year's vacation to do at least one good deed for the people's commune.

Most of those who were going to visit their relatives in the rural areas were young workers. Through their visits to relatives in the rural areas, the friendly relationship between the workers and the peasants would be strengthened. In order to enable the workers to understand the morale of the commune members and the changes brought about by the process of communalization, the factory Party Committee, from the middle of January, started to give to the entire body of workers in the factory a series of educational information talks concerning the alliance between the working class and the peasantry.

First, the Party Committee organized the workers to learn and discuss the documents concerning the people's communes, coordinated this campaign with the socialist educational program that had just begun in the factory, and greatly propagandized the new people and new enterprises that were brought into being on the agricultural production front. At the same time, discussion meetings were held to enable the workers to attain a full knowledge of the alliance between the workers and the peasants; the Party Committee members and Party Secretary of the Chung-te [Sino-German] Friendship People's Commune in the Peiping City suburb were invited to the meetings to deliver talks concerning the conditions of last year's production leap forward in the people's commune.

Through the above activities, the workers acquired a

full understanding of the people's communes' superiority and of the political value of support to agricultural production and the strengthening of the alliance between the workers and the peasants. On the basis of this ideology, the factory Party Committee made an important timely appeal to those workers who were going to visit their relatives in the rural areas during the New Year's vacation "to do one good deed for the people's communes".

In the sub-plants, workshops and small groups, a movement was started to organize those workers who were going to visit the rural areas to make plans and guarantees. The Communist Youth League Committee and the labor union held discussion meeting among those young and old workers who were going to the rural areas. At the meetings, many people criticized those people who wished to go to the rural areas merely for a good rest and expressed the desire that everyone visiting the rural areas should help the people's communes by doing at least one good deed; others stressed the fact that they should spend the New Year's vacation with hard work and thrift and should oppose extravagance and waste and should not bring along many unnecessary gifts.

Closely following this, the factory Party Committee wrote letters to all people's communes, introducing the production leap forward conditions in the factories, hoping that the people's communes would insist that visiting workers return on time to their factories to realize a New Year's production with red.

Because ideological activity was thoroughly and concretely carried out and educational activity concerning the alliance between the working class and the peasantry was so penetrating, all the workers visiting their relatives in the rural areas did give assistance to agricultural production and strengthened the alliance between the workers and the peasants. Before their visit, the workers wrote home to their relatives, requesting them to arrange a day so that they could do some work, and as soon as they reached home, they would participate in agricultural labor immediately. This year, there were over 400 workers going to visit the rural areas. They made concrete guarantees and preparations. In the tungsten-molybdenum sub-plant, two workers, Huang Wei-shao and Pi Sheng-li, were prepared to go home to marry during the New Year's vacation. Originally, they had planned to buy a number of gifts to take home, and now, they realized that they should spend the New Year vacation with hard work and thrift and prepare their weddings with economy, so they bought only a few necessary things to take home and avoided extravagance. They also planned to volunteer

one day's work for the people's commune, to tell their relatives and friends about the conditions of production in their factory, and to start a publicity campaign for the alliance between the workers and the peasants.

Many other workers planned to return to the rural areas to participate in the activity to eradicate illiteracy. Li Ching-shan's family lives in the Wa-tzu-yu People's Commune in I Hsien, Liaoning Province, and he works in the factory's central laboratory. After receiving a letter from home saying that their commune had just started a campaign to eradicate illiteracy, he bought a quantity of cultural reading materials, planned to take them home as gifts to the commune members and would utilize his New Year vacation time to help the commune members to further their cultural education.

Pan Yun-tse, an apprentice, planned to return home and to participate in the fertilizer accumulation activity. Some workers from both the tools and machinery sub-plants planned to take home some simple repair tools to help the people's communes to repair agricultural tools. Some workers who are interested in cultural and entertainment activities learned many new songs and dances and prepared to join the communal cultural activities when they reached home.

Everyone prepared to do at least one good deed after reaching home and to return to the factory to participate in the New Year production with a starting red; thus, they would realize their aim of visiting their relatives in the rural areas and strengthening the alliance between the workers and the peasants.

PEIPING ELECTRONIC TUBE FACTORY ATTAINS GREAT ACHIEVEMENTS AFTER NEW YEAR VACATION

[Following is the translation of a news report in Kung-jen Jih-pao, Peiping, 2 February 1960, page 1.]

After the workers of the Peiping Electronic Tube Factory over-fulfilled the January monthly plan eight days ahead of schedule, they made another stride toward victory. After the New Year vacation, first-day (1 February) production has attained another victory with a starting red for the month of February. According to statistics, that day's production output fulfilled daily production by 113%, and compared to the average daily production last month, it has increased 3.5%; the value of daily production has fulfilled the daily plan by 127%, and compared to the value of average daily production last month, it has increased 7.1%; product variety has fulfilled the daily plan by 100%; and there were no absences on the part of the workers.

On the first day after the New Year vacation, the Party Committee of this factory decided to promote a vigorous champion competition with ten items in the technical revolution and technical reform movement: (1) the rate of the workers' attendance; (2) production output, production value, and variety of products; (3) the rate of finished products in the fulfillment of plans; (4) workers' participation in control; (5) a day-to-day red group; (6) workers making above-norm production; (7) each worker to make one suggestion for technical reform; (8) workers participating in the competition; (9) workers participating in learning; (10) workers participating in health activities. All workers have good morale and high spirit to strive for the first place in this "ten items" competition.

The workers of the direct heat small tube workshop, after a whole day of struggle, attained the 100% mark for all "ten items". Its daily production output has fulfilled the plan by 110%. The receiving amplifier large tube subplant has 558 workers in its day shift and all the workers have attained above-norm production. The glass section and the installation section in the 102 workshop of the large

and medium tube sub-plant have launched a "ten items champion competition". Both of these sections have attained a starting red.

In the past, the glass section, in making six cathodes, required 3.5 hours, but now it requires only 2.10 hours and quality has reached 100%. The installation section has the task of completing ten sets, and the plan sets a time of nine hours, but after the competition began, the work has been completed five hours ahead of schedule and product quality has reached 100%. Previously, the same number of workers could not complete the installation of nine sets in eight hours, but now the completion of ten sets requires only 4.5 hours. In the 907 workshop, the Wang K'e-ch'in Section and the Chao Hui-su Section have started a competition between themselves; the former has fulfilled the plan by a 50% above-norm production, while the latter has fulfilled the plan by a 40% above-norm production.

While the competition was in full force, the workers in the entire factory also promoted a technical reform movement and production efficiency rose constantly. In the first shift alone after the New Year vacation, statistics have shown that 772 items of technical reforms have been realized. In the chemical sub-plant, the painting of the mica plates is the most difficult operation in the entire plant. In the past, the fulfillment of the daily task in painting the mica plates was a very serious problem. But after the workers in this section brought about a technical reform and the original manual operation was substituted with a mechanical operation, the daily production goal was fulfilled with just one shift of workers and was fulfilled by a 25% above-norm production. Thus, production efficiency increased two times. Wang Hua-feng, an apprentice in the 204 workshop of the equipment sub-plant, is a man who dares to think and dares to act. Using plates instead of wires, he increased his production efficiency eight times.

The large and medium tube sub-plant carefully but boldly made some technical improvements, including the welding process, and increased its production efficiency from making 70 tubes in eight hours in the past to now making 60 tubes in two hours; thus, its efficiency increased four times and finished product rate was raised 20%, while air evacuation time was reduced by two hours.

At present, in order to make this champion competition more penetrating and more continuously broadening and to become more vigorous and definite, this factory has set up a number of regulations for the competition, stipulating that each unit must make a small judgment every ten days, a

medium judgment every month and one large judgment every season. Through these judgments, the experiences must be summarized to victoriously realize "day-to-day red, month-to-month rising and quarter-to-quarter leaping".

PEIPING ELECTRONIC TUBE FACTORY FULFILLS ITS GOAL AHEAD OF SCHEDULE

[Following is the translation of a news report, submitted by the Reporting Team (T'ung-hsun Tzu) of the Peiping Electronic Tube Factory, in Kung-jen Jih-pao, Peiping, 28 March 1960, page 1.]

The Peiping Electronic Tube Factory, having challenged sister factories with a suggestion to start with red and to be red to the end, since the beginning of this year, has launched a movement for mechanization, chain automation and remote controls, transforming one factory into three and increasing product variety six times and has aroused a high tide in technical reforms. The factory over-fulfilled the State plan for the first quarter 15 days ahead of schedule, and attained seven days ahead of schedule an all-out fulfillment of the various goals set in its message for the new year to start with red in the first quarter. For instance, the message suggested an 18% increase in the value of production in the first quarter of 1960 over that of the fourth quarter of 1959, but during the first quarter, the value actually increased 18.5%. Product delivery was completed 21 days ahead of schedule for the whole quarter.

On 25 March this factory held a mass meeting and the entire body of workers has decided to strive for greater victories and hoped to struggle for 35 days in order to accomplish the technical program before 1 May, enabling the technical reform and technical revolution movement to become a "stream-line and complete set" high tide. The concrete content consists of: to raise productive capacity 17%, to raise finished product rate 2%, to lower material and parts consumption norm by 5%; on the basis of an already 5% reduction in manpower to make a further 2% reduction, to eliminate all strenuous labor, to reduce manual operation from 24% to 20%, to transform all forging, smelting, wood-work and all

transportation activities into mechanical operations; to establish seven automatic workshops, 17 continuous production lines, five remote control systems and to solve 100 items of production problems and technical difficulties.

In order to accomplish this program, the workers in the entire factory, from the top to the lowest level, have all prepared to keep detailed records, to seek out problems and to universally establish a "three-coordination" scientific and technical research group, so that there will be a research network, a series of specialized shock troops and a stream-line of advanced experiences.

Since the beginning of this year, the technical revolution movement in this factory has been very vigorous and attained rapid developments, while the masses have been widely aroused with high morale and concentrated goals, so they have attained great results. In the entire factory, from the productive departments to the auxiliary departments and the service departments, from the workshops to the offices, from the technicians to the apprentices, everybody is putting great efforts into technical reforms. Since the beginning of February, the whole factory has applied 3,400 items of technical reforms and there are technical reforms concerning the complete product, the complete sub-plant and the complete workshop. The content of reforms has ranged from the improvement of ordinary tools and equipment to the great advancement of mechanization, continuous automation and the remote control systems. The production appearance of the whole factory has been rapidly transformed, production output greatly increased, production level rises higher each month and has fulfilled all the goals in the first quarter as suggested in the message.

At present, the workers of this factory continue to take active action with a guarantee that the production level in the second quarter will be higher than that of the first quarter.

GREAT REVOLUTIONARY METHOD IN DESIGNING MADE BY MUKDEN ALUMINUM AND MAGNESIUM DESIGN INSTITUTE

[Following is the translation of a news report in Jen-min Jih-pao, Peiping, 25 March 1960, page 2.]

The Mukden Aluminum-Magnesium Design Institute is about to promote a vigorous revolutionary method in design. This revolutionary method brings about a basic change in the design activities. Electric computers have transformed tedious calculation work into simple electrification processes and drafting has been substituted with lithographic and printing processes. Thus, these methods have liberated the workers from the drafting-boards. The speed of design has been greatly accelerated.

In the past, the Mukden Aluminum-Magnesium Design Institute, like any other design institutions, used old-fashioned methods: make a decision on the draft, do calculations, make drawings, and develop blue-prints, etc. To develop the blue-prints for the planning of a medium-size aluminum factory usually required several hundred men working over drawing boards for several hundred days.

The revolutionary method in design was begun in the time of the 1958 great leap forward; it has been developed and has grown rapidly ever since. Since the Eighth Plenary Meeting of the Eighth All-China Party Congress, all design workers of the Institute have started a vigorous technical competition and everybody has offered suggestions to overcome various obstacles. A number of handbooks, calculation tables, blue-prints and a series of reforms appeared, greatly increasing design efficiency. But, calculation and drafting could not catch up with the other processes. In October 1959, the Liaoning Provincial Party Committee threw away all prejudices and took daring steps toward mechanization, automation, electrification and organization on the factory basis. The Committee also appealed for great efforts in the promotion of radios and pointed out the road to the design workers for basic technical revolution.

The revolution in design this time was outstandingly

shown in the electrification of calculation. Beginning from the 1960 New Year holidays, the Institute put great efforts in promoting a high tide in the electrification movement. The Construction Design Research Office, which did not know anything about electrification, made the first move. One of the engineers inthis office, Yang Yu-i, and over a dozen workers sacrificed their New Year vacation and worked diligently for five days and nights and finally succeeded in creating the first analog computer. Compared to the former hand and brain method of calculation, this computer raised efficiency 20 to 50 times. The Party Committee gave the movement timely support and encouragement; as such, it gained rapid development. The movement soon spread from the construction department to the motor, technology and the technical economy departments and even the service department, and from a dozen or more persons to include all the workers of all these departments, and everybody took part in the electrification movement.

After more than 20 days' of hard labor, they created 43 computers which could be used for equipment selection, material balance, many strata of frames, ventilation network, earth-work, material analysis, etc., so that the brain work involved in calculation was substituted by the electrification process. The speed of calculation was increased from 5 to 100 times; generally, it was raised to 50 or 60 times. For instance, in the Technical Economy Department, the calculation for the amount of materials and manpower in a construction project usually required 4 to 6 hours to complete, but now with the analog computer, it takes only a few minutes to find out the needed amount of men, bricks, sand, stones, timber, steel materials, including 15 kinds of building materials.

Another feature in this great revolutionary movement is the lithographic printing process. After the application of electrification in February 1960, drafting was far behind the other activities. The concerned workers planned to organize the various machines, organisms and blue-print drafting operations so that the whole blue-print making process could be simplified and labor economized. When the new blue-print was made, it could be printed by the lithographic process.

The electrification and lithographic printing processes have created favorable conditions for the organization of factories. This highly complicated mental labor can be transformed from a individual basis to a collective basis, organized control will be transformed from one project from the top to the bottom, to division of labor as in a factory. This

transformation has just taken shape in the Mukden Aluminum-Magnesium Design Institute and has shown its superiority. After the application of electrification, lithographic printing and planning on the factory basis, the automatic production line will be developed accordingly. At present, the research units concerned with construction, power, technology, and coordination all have coordinated electrification, lithographic printing, and organization reforms. So now, the newly organized engineering group, calculation depots, equipment groups, and the publicity group are all ... linked together to replace the old organization forms, and the old complicated procedures have been abolished.

The electrification of design activity and the preliminary organization on the factory basis have rapidly raised working efficiency and have attained an all-out realization of "more, faster, better and cheaper" methods for design activities. For instance, the completion of the preliminary design and the construction blue-print for a medium-size aluminum factory, in 1959, required seven months, but this year only one month is needed. Now, it can be completed within 15 days. This Institute has fulfilled all its annual plan in 45 days and the work quality is first class.

The revolution brought into being by this Institute has not only greatly increased working efficiency but has also liberated a great number of workers, who in turn strengthen design activities. In December 1959, only 20% of all the personnel in this Institute participated in design work; now, this number has increased to 40%. Since the beginning of this year, they have fulfilled 18 items of the research project. In addition, the Institute has despatched over 80 technicians and organized them into a technical service team to help factories and mines make technical improvements.

At present, the members of this Institute are using their wisdom and hands to continue the struggle for a further development of electrification and automation.

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