

Air Research Division

JUL 31 1961

JPRS: 4713

21 June 1961

MAIN FILE

SURVEY OF SOVIET HEAVY INDUSTRY (24)

Reproduced From
Best Available Copy

DISTRIBUTION STATEMENT A
Approved for Public Release
Distribution Unlimited

REMOVED TO MAIN FILE

19990714 076

Photocopies of this report may be purchased from:

PHOTODUPLICATION SERVICE
LIBRARY OF CONGRESS
WASHINGTON 25, D. C.

U. S. JOINT PUBLICATIONS RESEARCH SERVICE
1636 CONNECTICUT AVE., N.W.
WASHINGTON 25, D. C.

JPRS: 4713

CSO: 1300-S/24

SURVEY OF SOVIET HEAVY INDUSTRY (24)

This is a series report, published approximately biweekly, which contains items of interest on Soviet heavy industry as reflected in articles, short news items, announcements, etc., appearing in various USSR and other publications. The items contained in this report fall under the broad categories listed below in the table of contents.

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
Metallurgy and Mining	1
Machine Tools	3
Chemical Industry	12
Pumps and Compressors	18

METALLURGY AND MINING

Flame Conquers Rocks

In the Heavy Machinery Plant imeni Kuybyshev in Buzuluk the assembly of first units of the thermal action drill rig has begun. Nothing like this has been produced so far by our industry. These drills will make it easier for drillers and geologists to reach and to mine underground treasures.

The thermal action drill is fundamentally different from all existing drilling units. The penetration is effected by means of gas flowing from the tip of a combustion chamber. The temperature of the flame reaches 2,500 degrees centigrade. The flame can cut through underground rocks as well as through soft soils. In an hour it can drill through 5 to 8 meters of hard rock. The rig is self-propelled.

Experimental units were tried with great success at the Yuzhnyy Southern Ore-Dressing Combine in Krivoy Rog. The first batch to be produced will be sent to the same place. (Komsomol'skaya Pravda, 5 April 1961, full translation.)

The Workers of Novokramatorsk Will Make It

The shops of the Novokramatorsk Machinery Plant are intensely busy.

Among the new types of machinery being built by Novokramatorsk workers are giant excavators, in comparison to which existing full-revolving shovels will appear tiny.

The first rotary excavator with a capacity of 1,000 cubic meters per hour is being tested under actual conditions in the Chasov-Yar quarry in Donbass. In various shops of the factory subassemblies are being completed of still more powerful multi-bucket rotary excavators with a capacity of 3,000 cubic meters per hour. The height of this machine will equal that of a ten-storied house, and its total weight will be 7,100 tons.

The rotary excavator is designed with the boom extending 31 meters. The use of such a boom will considerably reduce the moving of this machine from one place to another during operation. The excavated material will be moved by a system of conveyer belts stretching for several kilometers and deposited at a dumping point.

The continuous conveyer belt method will permit all-round mechanization of open pit operations. The whole complex, namely, the rotary excavator, conveyer belts, and dumper can be started on the orders of a dispatcher, whose cab is furnished with radio communication equipment,

The Worker of Novokramatorsk Will Make It (Cont'd)

television, etc. It was estimated that the use of one such complex on one coal pit will reduce the cost of operations, as compared to a single scoop unit, by three to five million rubles.

A group of designers is completing the development of a design project for a rotary excavator with the capacity of 5,500-6,000 cubic meters an hour. A preliminary layout is completed for the most powerful rotary excavator in the world, the "ERShR-2600". This gigantic machine will remove a layer 50 meters thick. Its maximum capacity will reach 9,350 cubic meters in dense soil and 11,200 cubic meters in loose soil. The boom of the excavator will extend to 220 meters. Just to move the amount of material dug up by the excavator in one hour 340 railroad cars would be needed.

The first gigantic earth-digging excavator of continuous action will operate in the Krasnoyarsk Kray in the largest open-pit coal mine. Its use will enable the Siberian miners to get the cheapest coal in the whole country, just 30-40 kopecks a ton.

The collective of the plant continues to work on the production of powerful rolling mills for the Magnitogorsk Metallurgic Combine and for the Karaganda and Novolipetsk Metallurgic Plants.

As is generally known, the Novakramatorsk Plant came up with a remarkable suggestion, namely, to modernize the currently used equipment built by the plant in the past years. Now it is planned to modernize

The Workers of Novokramatorsk Will Make It (Cont'd)

the pipe rolling mill of the Zakavkazskiy Metallurgic Plant and the rolling mills of the Artem Plant of Non-Ferrous Metallurgy, and the "Zaporozhstal'" Factory. A unique machine for flame descaling has been designed. The first of such machines will be built for the "Zaporozhstal'" Plant.

Among new production items of Kramatorsk machine builders particular attention is deserved by forge presses with concrete frames and a hydraulic press for the plastic industry. (Pravda, 15 March 1961, partial translation.)

Towards The Most Important Projects of the Seven-Year Plan

The rotor spun a few more times and came to a stop. The tests were over. They demonstrated that the turbine, assembled by the skilled hands of N. Dubinin's brigade of communist labor, functions without a hitch.

In a few days this unit, rated at 18,000 kw., will be sent to Magnitka, Kazakhstan. The order was filled ahead of time as requested by the builders of the Karaganda Metallurgic Combine, who recently visited the Nevskiy Machinery Plant imeni V. I. Lenin. In this new turbine, as distinct from previous designs, several subassemblies were modified and improved. As a result it became more dependable and more convenient to operate. Also, it is now more economical as far as fuel consumption is concerned. Similar turbines coupled with modern compressors, displacing as much as 4,250 cubic meters of air per minute, will be shipped from the shores of the Neva to Zapadno-Sibirskiy, Novotul'skiy, Cherepovetskiy, and metallurgic plants of the land.

Machine builders undertook to construct the blower unit for the largest blast furnace in the world which is being built in Ukraine. The new compressor will be able to deliver 5,500 cubic meters of air per minute, almost one and one third as much as the best existing ones. To power it a new turbine is being built in the plant to be rated at 22,000 kw. (Trud, 5 April 1961, partial translation.)

MACHINE TOOLS

New Automatic Line

Special Design Bureau No 1 of the Moscow City Sovnarkhoz has designed the Model 1L96 automatic line for machining cylinder blocks of trucks. The four sections in the line will consist of 85 large double action gang-type machine tools.

The line is designed for machining without changes in the set-up blocks for both gasoline and diesel engines. It will machine 60 parts per hour. The Moscow Machine Tool Building Plant imeni Ordzhonikidze will build the new automatic line in 1961 for the Moscow Motor Vehicle Plant imeni Likhachev. (Moscow, Komsomol'skaya Pravda, 25 Aug 60)

Milling Machine

In 1959, the Belorussian Sovnarkhoz, for the purposes of specialization, transferred the production of a certain model milling-cutting machines to the Gomel' Machine Tool Building Plant imeni Kirov. In July 1960, the plant began the production of the first consignment of Model 8A67 machine tools.

However, difficulties arose because the Minsk Machine Tool Building Plant imeni Kirov failed to deliver certain subassemblies and parts. An appeal was made to the Administration of Machine Building and Machine Tool Building of the Belorussian Sovnarkhoz with no results. Only two months remain until the end of 1960 and the Gomel' plant has not fulfilled half the plan for the production of milling-cutting machines. (Minsk, Sovetskaya Belorussiya, 13 Nov 60.)

Rotary Tables

The Yerevan Tool Plant has begun the production of rotary tables for milling machines. (Yerevan, Kommunist, 15 Nov 60.)

Plant Interchanges

One of the most important means of raising the qualification of engineers, technicians, and workers is exchange of experience with leading enterprises. A number of plants of the Administration of Machinery and Machine Tool Building of the Armenian Sovmarkhoz are using this method extensively. For example, the Leninakan Grinding Machines Plant has close contact with the main Leningrad Grinding Machines Plant imeni Il'ich; the Lusavan Boring Machines Plant, with the Leningrad Boring Machines Plant imeni Sverdlov; the Yerevan Milling Machines Plant, with the Odessa Milling Machines Plant; and the Yerevan Hydraulic Fittings Plant, with the Khar'kov Hydraulic Fittings Plant. -- I. Sochinskiy, Chief, Administration of Machinery and Machine Tool Building, Armenian Sovmarkhoz (Yerevan, Kommunist, 18 Nov 60)

New Electric Spindles

This plant [Moscow Elektronasos Plant] produces electric pumps that feed emulsion for cooling workpieces. The electric pumps are shipped not only to various parts of the USSR, but also to many foreign countries. The most significant achievement of the plant is the development of a series of electric spindles (electric motors). Abrasive wheels are fastened in these miniature and compact units. They machine parts with great precision and to a high finish. A group of specialists headed by designer S. Komissarov are improving them. Experimental models of a new high-production electric spindle with a speed of 72,000 rpm have been produced. (Moscow, Vechernyaya Moskva, 21 Sep 60)

New Screw Machine

The Lipetsk Machine Tool Building Plant is changing to the production of the Model 1-L-62 screw machine. It is better than the 1-A-62.

The plant should organize the production of the Model 37-22 surface grinding machines. (Moscow, Ekonomicheskaya Gazeta, 23 Nov 60)

Machining Tool

The quantity production of machine tools for electric discharge machining of metal has been entrusted to the Troitsk Machine Tool Plant of the Chelyabinskiy Sovnarkhoz. This plant together with the Leningrad Carburetor Plant has been called upon to satisfy the entire Soviet demand for these machine tools. (Moscow, Leninskoye Znamya, 23 Nov 60)

New Products

The former Moscow Stal'most is organizing the production of automatic lines and gang machine tools instead of overhead cranes. The plant, which is now called the Moscow Gang-Type Machine Tools and Automatic Lines Plant, has put a new machinery assembly building into operation. There is a large jig borer department in the new building.

The plant produced its first machine tools in 1960, one of them grinds the faces of parts, and another does the internal honing of steel tubing.

The plant is testing an automatic internal grinding machine for machining bearing rings. The plant is also making preparations for the production of six automatic lines in 1961. (Moscow, Vechernyaya Moskva, 23 Nov 60)

Heavy Milling Machines

The Leningrad Plant imeni Sverdlov organized the production of eight new types of heavy milling machines in 1960.

The LR-162 tracer type milling machine is designed for machining large pre-assembled propellor blades. It can mill a vertical surface up to 1.8 meters, and a horizontal surface up to 3.2 meters. The machine is universal and remote controlled.

A group of heavy milling machines for machining tractor clutch housings has been produced for the Chelyabinsk Tractor Plant. (Moscow, Vechernyaya Moskva, 30 Nov 60)

New Automated Lines

SKB-6 /Special Design Bureau No 6/ has designed an automated shop for machining motor vehicle and tractor engine valves at the Kuybyshev Avtotraktordetal' Plant. The shop will consist of four automated lines. The Red Proletariat Machine Tool Building Plant is producing two types of components for these lines. (Moscow, Moskovskaya Pravda, 30 Nov 60)

New Milling Machine

A new IF-30 large special design semiautomatic milling machine has been developed at the Leningrad Machine Tool Building Plant imeni Ya. M. Sverdlov for machining the motor housings of electric locomotives. It can also machine the bed plates of electric locomotives. The new machine tool will be sent to the Riga Electric Locomotive Building Plant.

The Leningrad Machine Tool Building Plant imeni Sverdlov has developed more than 90 large special-design boring and milling machines since the beginning of 1960. (Leningrad, Leningradskaya Pravda, 1 Dec 60)

Surface Grinder

The Minsk Machine Tool Building Plant imeni Voroshilov has developed the Model 3510 planer-type surface grinding machine for machining the surfaces of large parts. It can grind parts up to one meter wide, 800 mm high, and 4 meters long. It is operated by remote control.

The machine tool has two grinding heads. One of them operates with a grinding wheel 600 mm in diameter and 150 mm wide, the second is a swivel-type head and operates with a small cup-shaped grinding wheel.

An important feature of the new machine tool is the standardization of its parts with those of planers and planer-type milling machines. About 23 percent of its parts have been standardized. (Minsk, Sovetskaya Belorussiya, 6 Dec 60)

"Krasnyy Borets" Plant in Orsha

The Orsha "Krasnyy Borets" Machine Tool Building Plant sends its products not only to enterprises in Belorussia, but also to Moscow, the Urals, Novosibirsk, and many other cities.

A great amount of work is being done at the plant on mechanizing labor-consuming operations. Enterprises in Vitebsk, Minsk, and Leningrad have been of assistance to the Orsha Plant. (Minsk, Sovetskaya Belorussiya, 8 Dec 60)

Automatic Machine Tools

G. N. Rusak, chief engineer of the Novo-Vil'nya Zhal'giris Machine Tool Building Plant, said that the plant has designed new 6-P-80V and 6-P-10V automatic machine tools. (Tbilisi, Zarya Vostoka, 10 Dec 60)

Precision Machine Tool

The Vil'nyus Grinding Machines Plant has assembled the first 3A 1534 super precision machine tool. The new machine tool will be universal and will be able to grind parts of any shape. (Tbilisi, Zarya Vostoka, 10 Dec 60)

Hydraulic Press

The Kolonna Heavy Machine Tool Building Plant organized the production of 28 types of new machine tools and presses in 1960.

The plant is now assembling a large hydraulic press for sizing and hydraulic testing of 1,020 mm diameter pipe. The plant is the first producer of such a press. (Moscow, Leninskoye Znamya, 14 Dec 60)

New Machines for the Lumber Industry

The Nal'chik Machine Tool Building Plant should produce 72 semi-automatic lines /for cutting timber/ that have been designed by TsNIIME /Central Scientific Research Institute of Mechanization and Power Engineering of the Timber Industry/. (Moscow, Levnaya Promyshlennost', Apr 61, p 31)

CHEMICAL INDUSTRY

Growing Pains Are Too Prolonged

The Penza Economic Rayon is an important center of chemical machine building. At present several enterprises are being refitted here which produce heat exchangers, mixers and blenders, rectification columns, measuring devices, drum-type vacuum filters, powerful air and gas compressors, vacuum pumps, and all possible kinds of steel and cast iron valves and fittings. By 1965, the volume of production of compressors and fittings in this plant will increase 4.5 times as compared to 1959. Already this year the "Penzkhimmash" Plant and the Compressor and Heavy Industry Fittings Plant will produce almost one and a half times as much machinery for large scale chemical operations as during the last year.

To render practical assistance in the development of new designs and the introduction of progressive technical methods, a branch of the Scientific and Research Institute of Chemical Machinery was established in Penza. In short, the enterprises of the Penza Economic Rayon were allotted a sufficiently important part in the general country-wide system of chemical machine building. This is the reason why we became interested in the extensive discussions conducted on the pages of the

Growing Pains Are Too Prolonged (Cont'd)

Ekonomicheskaya Gazeta concerning the problems arising in connection with this important branch of the national economy.

The basic link of any industrial production is planning. But one has to admit that planning agencies often limit their relations with sovnarkhoses to merely handing them certain production plans, often leaving them without any help in increasing their productive capacities. Let us offer some examples. It is well known that chemical equipment is produced in small lots, or even one unit at a time. Under these conditions, setting up production is a very complicated matter. It is absolutely essential that plans for production, listing all the items to be produced, should be made known to sovnarkhoses and plants at least three or four months before the beginning of the year. Only under such conditions is it possible to prepare production blueprints, specifications, etc, to order the necessary materials and to purchase the necessary component parts, to work out production methods, and to meet labor requirements in order that production may proceed normally and smoothly right from the first quarter of the new year. Likewise, it is necessary to achieve a fixed plan for the whole year.

The above are simple, everyday truths. However, the experiences

Growing Pains Are Too Prolonged (Cont'd)

of past years indicate that they are not equally evident to the people in Gosplan RSFSR and VSNKh /Vserossiyskiy Sovet Narodnogo Khozyaystva -- All-Russian Council of National Economy/. What other explanation can be offered for the fact that the plan was revised several times during the year both with regard to quantity and type of items to be produced. In February at the "Penzkhimmash" Plant the list of items on order was altered by almost 15% of the total annual output, whereas the scheduled production volume was sharply increased for the same month. A similar occurrence took place at the "Kuzkhimmash" Plant, not in February, however, but in April.

At the same time, the necessary funds to take care of changed production plans for the first quarter of 1960 were released by Gosplan RSFSR only in March and then only partially. The stainless steel sheets and tubing were received in quantities of almost 50% below the required minimum. Tantalum tubing and bimetal needed to complete very important projects already started for large-scale chemical operations were not delivered. For this reason the "Penzkhimmash" Plant still cannot complete the reactor for nitriding, which is urgently needed at the Lisichansk Chemical Combine, or a reactor for tar required by the "Karbolit" Plant in Kemerovo.

During the previous year the situation was no better with regard

Growing Pains Are Too Prolonged (Cont'd)

to the release of funds for creation of additional industrial capacities. As a result of the foregoing, plus the most unsatisfactory quarterly allocation of funds for metal and building materials and a complete absence of funds for hoisting and moving equipment, only 33.6 thousand square meters of plant area instead of 47.7 thousand were put into use in chemical machinery plants.

Penza Chemical Machinery Plants did not get much of the required special and welding equipment. If it is further added that there were internal difficulties as well, then it becomes clear why the plan for production of chemical equipment was fulfilled in 1960 by only 80%.

1961 did not bring any substantial changes. Many of the causes which interfered with successful operation of the plants in the past remained unchanged. As the basis for work in 1961, an itemized plan approved in August and September of 1960 was used. We worked out detailed technical documentation, compiled requisitions for materials and parts, and started work on the preparation for production. However, in February the Rosglavkhimkomplekt /RSFSR Main Administration of Chemical Complexes/ cancelled 50 orders placed with the "Penzkhimmash" Plant totaling 2,900,000 rubles. Irrecoverable expenses for the preparation of technical specifications came to about 1,000,000 rubles. Plant

Growing Pains Are Too Prolonged (Cont'd)

storerooms were left with great quantities of previously ordered materials and parts. Excessive dead inventories, resulting in the tying-down of revolving funds, are the scourge of our chemical machinery plants.

As in the previous year, the Sovnarkhoz was left short of one million rubles needed for the reconstruction of enterprises. At the same time an additional 25,000 square meters of plant areas are scheduled to be made available this year. If construction plans break down, it may cause the breakdown of increased production plans for 1962. The construction of huge cast iron and steel foundries of region-wide importance is jeopardized because the appropriation for metals is insufficient for the completion of the project. And this is not the whole story. Out of a total quantity of 530 required units of special equipment only 172 were allotted. There is also an acute shortage of specialists.

It seems to us that the root of all evil lies in the lack of coordination in the activities between the Gosplan RSFSR, All-Russian Sovnarkhoz, and Rosglavkhimkomplekt.

The last of the afore-mentioned organizations is particularly at fault. The workers of Rosglavkhimkomplekt must study with greater care the requisitions of chemists, avoid issuing two release authorizations on the same equipment, plan in advance the items to be manufactured, display more interest in the creation of industrial capacities, and insure

Growing Pains Are Too Prolonged (Cont'd)

adequate supplies to the chemical machinery plants. It is this organization that must prevent the issuance of orders interfering with the specialized line of production of any given plant. This is something that happens all the time.

The Institute of Scientific Research in Chemical Machinery should display more daring and be more active. The production workers expect great help from them in the solution of such problems as the development and introduction of homogeneous lead coating of steel surfaces of chemical equipment, manufacture of plastic parts, utilization of progressive protective coating made out of new polymer materials (such as the spraying on of plastic materials by means of a gas flame, resin coatings, bonding rubber and plastic compound coatings, coating surfaces with liquid neoprene) and the standardization of chemical equipment.

Now just one more thought. It seems to us that to do away with many difficulties it will be sufficient to centralize the coordination of all the problems concerning chemical machinery in one place. In RSFSR these functions should be assumed by the All-Russian Council of National Economy. We must exert every effort towards the elimination of growing pains in one of the most important branches of national economy once and for all. (By L. Terent'yev, Ekonomicheskaya Gazeta,

Growing Pains Are Too Prolonged (Cont'd)

19 April 1961, full translation.)

Chemistry Cannot Wait

The "Progress" Plant of chemical equipment in Berdichev is one of the leading factories in the region of the Kiev Sovnarkhoz, if not in the whole republic. The machines built in this factory are eagerly awaited on new constructions in Lisichansk, Rubezhnyy, Chernigov, and Cherkassy on nitrous fertilizer and superphosphate plants working towards future harvests.

The main manufacturing line of this plant is equipment for filtration. Frame-type manual pressure filters have been produced here for many years. The production of these filters has been fully worked out and the plan can be met without too much effort. The trouble is that this pressure filter has become outdated, and chemists want modern equipment.

In 1959 the Progress Plant in Berdichev was directed to produce the first lot of automatic chamber-type pressure filters (FPAK model). This automatic unit was designed by the collective of the Institute of UKRNIKHIMMASH [Ukrainian Scientific Research Institute for Chemical Machinery]. With the use of this filter the productivity of labor in chemical industry sharply increases, particularly in the line of mineral fertilizers. The Vinnitsa Superphosphate Plant and many others are asking for this FPAK filter.

Chemistry Cannot Wait (Cont'd)

Well, what is the answer from the Berdichev Plant? This year they received requisitions for 130 new units, but succeeded in cutting down the order by half. The first quarter is over, but chemists have not received a single machine.

What is the reason? The management willingly offers an explanation. It is the fault of the suppliers. For example, the Kursk Factory of rubber goods has not delivered the condensing hoses. But, it was the Berdichev Plant that was slow in sending the equipment for making the hoses. Besides, even if the hoses had been received in Berdichev, they still would not have been used since not a single machine has been assembled so far.

To explain the reasons for the poor treatment accorded FPAK, the management of the plant asserts that the design of the machine is not fully worked out.

Meanwhile the "old-timer", the frame-type pressure filter, is standing in the way of the new item. It does not really matter that the designers of the Rubezhansk Chemical Combine provided for 52 FPAK's. The Combine was forced to accept half their order in old manual pressure filters, since the Berdichev Plant just would not give them the requested amount of automatic filters.

In accordance with the decision of the authorities, the Progress

Chemistry Cannot Wait (Cont'd)

Plant is supposed to produce two sample models in 1961 — an enameled pressure filter for chemists and a pressure filter for coal concentration. Nevertheless, the Berdichev Plant administration has not even taken the first steps towards the development of blueprints, specifications, etc. for the new machinery. This fact just does not bother the management of the Progress Plant. However, they are quite upset over the fact that they have a competitor in the production of manually operated pressure filters, the Korosten' Factory of Chemical Machinery.

The manually pressure filter is our only mass produced item, declare the Korosten' people. The rest are just individual orders covering more than 400 items.

Instead of helping the young enterprise, the Kiev Sovnarkhoz and the Department of Heavy Machinery of the Gosplan of the Ukrainian SSR put more and more puzzling problems in their way. For example, the plant has to deliver blenders for chemists during the second quarter. This equipment needs reducers. The factory producing the reducers was directed to deliver them during the fourth quarter of the year.

The most powerful crane in the plant has a capacity of only ten tons, but the plant is ordered to produce a machine, one subassembly of which weighs 15 tons.

Chemistry Cannot Wait (Cont'd)

These and many other disorders prevent the Korosten' group from producing high quality work and delivering it on time to the chemists and fertilizer manufacturers. The Dneprodzerzhinsk Nitrous Fertilizer Plant was expecting to get unit heat exchangers, blenders, and extracting units during the first quarter of the year, but can actually receive them, under the most favorable conditions, during the first ten days of May.

The veteran plant "Leninskaya Kuznitsa" is increasingly active in its work of serving chemistry. This year it has to deliver much more equipment than last year.

However, not everything is right at "Leninskaya Kuznitsa". Under the cooperative arrangement they are to be furnished with 684 bottoms for chemical equipment. The Gosplan allotted funds to a number of subcontracting enterprises. There was a rush to sign contracts with subcontractors, but it turned out that the "Red October" Plant was only ready to accept an order for about half the necessary quantity. The "October Revolution" Plant in Lugansk flatly refused to deliver large size bottoms, even though they alone have a press of the required capacity.

It has been suggested many times that the factories for chemical machinery should be assigned plans based upon lists of items to be

Chemistry Cannot Wait (Cont'd)

produced rather than on a total monetary value. This will force the supplier plants to toe the line, since at present they tend to insist on the delivery of highly priced but easy to build machines so as to claim that they have met the plan by delivering the required total value. Likewise it would force the planning organizations and the sovnarkhozes to look deeper into the capacities of the factories and to take this into account in the distribution of orders.

We have frequently heard complaints at various plants directed against the Kiev Sovnarkhoz and the Ukrainian Gosplan. One of the most frequent complaints is that the people entrusted with the planning and guiding of operations are not acquainted with the actual situations as they exist on the spot. One does not have to go far to convince oneself of this. The chief specialist for the chemical machinery of the Gosplan Ukrainian SSR, A. L. Kirillov, in response to the question as to what was delaying the production of the enamel coated pressure filter, answered: "Nothing. The machine is practically ready". Actually, it was not even in the blueprint stage.

Here is another example. The "Progress" Plant in Berdichev is growing, but the facilities of its foundry remain the same. Even now there is a shortage of castings. What will happen when the new machine

Chemistry Cannot Wait (Cont'd)

tool and assembly shop will be ready to utilize their full capacity? The Sovmarkhoz manages its construction agencies in a very inefficient manner. (Pravda Ukrainy, 26 April 1961, partial translation.)

PUMPS AND COMPRESSORS

Chita Refrigerators

Relatively recently the Chita Machinery Plant manufactured small size electric motors in small lots and their replacement parts. It was only when the Sovmarkhoz took over the enterprise that it started to develop at a rapid pace. Over a period of four years the plant underwent a complete transformation. It was assigned a new specialized line of production. We were directed to build movable compressor units and later refrigeration units.

The increase in volume of production and improvement shown by other most important indexes of production were due to the replacement of outdated equipment and a reorganization of the enterprise. After just one year, the factory produced on the same plant area more than two and one half times as many refrigeration units. At present our enterprise is one of the leading ones in the field of compressors and refrigerating equipment.

As a result of improved industrial technology, efficiently organized production, and the introduction of labor-saving mechanization, both technical and economic indexes showed a marked improvement.

Chita Refrigerators (Cont'd)

In 1960 as compared to 1958 the production cost per ruble dropped from 90,9 to 83,9 kopecks.

Realizing that the total volume of production is not the only yardstick measuring the success of an operation, we constantly master the production of new and improved models. In this important work the collective relies upon the help of scientific and research institutes and design bureaus. Thus, due to the help received from the scientific workers of the Central Design Bureau for refrigerator machinery, a number of new refrigerating units are being readied for production, most of the details of these units are standardized.

This year we have already achieved the volume of production scheduled for the last year of the seven-year plan. Having taken into account the existing potential, the collective of the plant presented to Sovnarkhoz their suggestions of new goals scheduled for 1965. An increase in production is envisaged at a negligible cost in capital investment. The output of the refrigerating units will increase more than four times. The investment will be repaid within the same year.

It goes without saying that there are still a lot of shortcomings. Technology could be improved, production planning leaves much to be desired, and rejection losses are heavy. Having done away with these shortcomings we shall utilize our potential reserve. However,

Chita Refrigerators (Cont'd)

there are factors beyond our control. The plant experiences a very grave shortage of engineers and technicians. It will suffice to say that our present ratio of designers to workers is one to 200.

In a number of instances planning agencies made decisions which disrupted the specialized line of our plant. For example, we were directed to proceed with the production of a compressor unit Model UKP-80 for the oil industry which is being currently produced by the Moscow Plant "Borets". (by A. Mokher, Ekonomicheskaya Gazeta, 26 April 1961, partial translation.)