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SELECTED ECONOMIC TRANSLATIONS

ON EASTERN EUROPE

NO. 340

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INTRODUCTION

This is a serial publication containing selected translations on all categories of economic subjects and on geography. This report contains translations on subjects listed in the table of contents below. The translations are arranged alphabetically by country.

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INTRABLOC

SOVIET HELP IN THE DEVELOPMENT OF THE RUMANIAN METALLURGICAL  
AND MACHINE-BUILDING INDUSTRY

Following is a translation of an article in the Rumanian-language periodical Metalurgia si Constructia de Masini (Metallurgy and Machine-Building), Bucharest, Vol. XII, No. 2, February 1960, pages 180-181.

A special importance for the socialist industrialization of Rumania is the help which the USSR has granted the country in the development of heavy industry. This help consists of the deliverance of basic raw materials for the metallurgical and machine-building industry, machines and equipment, complex installations, and even entire plants, exchange of experience and of technical documentation, technical assistance, study visits, specialization of personnel, and others. Thus, the use of the production capacities of the Rumanian machine-building industry were ensured during the period of rebuilding the economy after the war, by the deliverance of iron ore, coke, and rolled metals from the USSR. In the following period, marked by the production increase of basic raw materials, imports from the USSR covered a significant part of the consumption of rolled metals, iron, and coke. Of the total iron ore imported to Rumania, the part from the USSR represented 82 percent in 1955, 85 percent in 1956, 92 percent in 1957, and 97 percent in 1958. In 1958, 78 percent of imported rolled ferrous metals, 44 percent of tubings, and 62 percent of coke, was from the USSR.

At the same time, the Soviet Union granted tremendous help to Rumania in enlargening the production capacities, and modernizing the metallurgical and machine-building industry, by delivering significant quantities of machine-tools, and even complex installations and entire plants, as: the blooming mill with a capacity of 1,000 tons at Hunedoara, the shape rolling mill of 650 mm at Hunedoara, the ball-bearing factory at Birlad, the coke and chemical factory at Hunedoara, the factory for concentrating ores at Hunedoara, the pipe rolling mill at Roman. Also, soviet equipment has been set up in the factory for tools at Risnov, the "Tudor Vladimirescu" plant at Bucharest, and the "9 May" factory at Saligny.

Rumania received loans and credit from the USSR under advantageous conditions, which permitted the acquisition of equipment, machines, and other necessary goods, and the repayment of these objects by deliverance of traditional goods, or of products made by the enterprises constructed with this credit. For example, the pipe rolling mill at Roman had been constructed with equipment received from the USSR on industrial credit, which will be payed with the production of rolled metals.

The technical and scientific collaboration between Rumania and the Soviet Union, as a result of the 17 February 1950 convention, is of great use for the development of the Rumanian metallurgical and machine-

building industry. The collaboration is implemented by the mutual arrangement and exchange of technical documents, planning for industrial construction, by mutual exchange of experts both for granting direct technical help, as well as for studying the achievements obtained, coordinating the activities of scientific research institutes, and others.

Thus, the technical documentation or the plans received from the USSR have been the basis, in Rumania, for the manufacture of an oil drilling turbine, special electric motors for the oil and coal industry, compressors, tractors, auto-motors, oil equipment, ball-bearings, electric locomotives, trucks, and others. Also, this has served to commission on time the production of universal lathes, shapers, revolving cranes, excavators, various machines, and others. At the same time, the USSR granted help to Rumania in planning the 450 and 700 cubic meter blast furnaces at Hunedoara. During 1950-1958, Rumania received from the USSR 102 plans for capital constructions, 348 plans for machines and equipment, 149 technological documents, 216 various technical documents, resulting from the departments. Of this, 349 documents have contributed to developing the mining, power, and metallurgical sectors, as well as the machine-building sector.

Also, the application of the advanced soviet methods of work, which are carried out on a large scale, is very significant for the development of the metallurgical and machine-building industry. For example, the following work methods have been applied in Rumania: the soviet method of assembling naval vessels welded with impregnated sections and bloc-sections, and the method of automatic and semi-automatic welding in naval construction; moving oil-well derricks without disassembling them; the use of a defectoscope with radioactive isotopes at the Turnu-Severin shipyard, and in the ITCME research laboratory, and others.

The Soviet Union also grants Rumania technical help in creating and developing some sub-branches of the heavy industry. Thus, the USSR has given Rumania the assistance of a large number of experts in the manufacture of injection pumps, in the manufacture of turbines, in the improvement of manufacturing technology of oil equipment, in the application of advanced methods of hardening metals by means of high frequency currents, in the modern methods of precision casting, and others. Between 1955-1958, there were about 90 soviet specialists who contributed to the development of the Rumanian heavy industry of the Ministry of Heavy Industry. At the same time, Rumanian specialists were sent to the USSR to study certain problems. For example, Rumanian specialists in the USSR, have studied the problem of working steel in the 185 ton Siemens-Martin furnaces, the problem of planning thermo-heating plants and of planning asynchronous motors, of manufacturing oil equipment, technical scientific achievements in the field of the machine-building industry, and other problems. Over 550 scientists, engineers, technicians, and workers of the heavy industry were sent to the USSR (1950-1958) for specialization and qualification. About 480 of these people were from the metallurgical and machine-building industry.

The help of the Soviet Union and the friendly collaboration with the other socialist countries constituted a tremendous contribution to the liquidation of economic drawbacks in Rumania. This assistance facilitated the construction and the powerful development of the Rumanian heavy industry, the creation of policies for socialist industrialization, which is the main reason Rumania was transformed into a fully developing agro-industrial country. In 1959, for example, the production of steel was about 4.6 times greater than the production in 1938, of rolled metals about 3.2 times, and the production volume of the machine-building industry in 1958, was 7.5 times greater.

The Rumanian machine-building industry is successful in well satisfying the internal needs of all machines and equipment, and in making itself known in the international market for its machine and equipment exports.

All this points out that the help from the USSR to the Rumanian people and to other people who are building socialism, and the collaboration and mutual friendly assistance between the socialist countries, based on the principle of proletarian internationalism, makes it possible for those countries which are economically lagging behind, to quickly make up for their losses. In this way, these lagging countries will gradually become equal to the level of the economic and cultural development of the socialist countries in conditions of powerful development of the entire socialist camp.

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## BULGARIA

### SUCSESSES IN THE DEVELOPMENT OF THE METALLURGICAL AND MACHINE-BUILDING INDUSTRIES IN BULGARIA

Following is a translation of an article by A. Izmirliiev in the Rumanian-language periodical Metalurgie si Constructia de Masini (Metallurgy and Machine-Building), Bucharest, Vol. XII, No. 2, February 1960, pages 156-157.

The metallurgical and machine-building industries in Bulgaria are new branches of industry, created during the people's democratic regime. The Bulgarian bourgeoisie had taken no steps whatsoever in the field of metallurgical and machine-building industry. They had preferred to invest their capital in those branches of the economy which assured themselves quick profits and which had not demanded large capital investments. In 1939, the production of ferrous and rolled metals in the small metallurgical enterprise "Bilgarski jelezni zavodi" (Bulgarian Iron Works) near Dimitrovo, was about 4.4 thousand tons. In 1944, the share of the machine-building and metallurgical processing industry in the total industrial production was only 0.28 percent.

With the great importance of metallurgy and machine-building for a rapid technical progress of the country, the Bulgarian Communist Party and the government of the People's Republic of Bulgaria established a grandiose program for the construction and development of these basic branches of heavy industry. During 1949-1958, over 1.5 billion leva were invested for the machine-building and metallurgical processing industry. These objectives have assured the construction of a series of modern plants, equipped with the newest technology.

During the First and the Second Five-Year Plans, the following were commissioned: 2 plants for repairing machines; the "G. Kirkov" plant for the construction of boilers; the "G. Dimitrov" agricultural machine plant at Ruse; the "G. Dimitrov" pump plant at Vidin; the machines plant for processing metals at Sofia; the "Bolsevic" tool plant at Gabrovo; the "G. Dimitrov" plant for construction and reparation of ships at Varna; the constructions plant at Turnovo; the machine-building plant at Kolarovgrad; the "Vasil Kolarov" high tension current plant and the "Klement Vorosilov" low tension plant at Sofia, and others.

The volume of industrial production in the republican machine-building and metal processing industry increased 9.4 times in 1957, compared with 1948. The volume of production of the machine-building industry, of republican importance, increased 2.3 times during the Second Five-Year Plan (1953-1957). The following increases were accomplished during the same period: for power and electrical engineering machines and equipment, 2.5 times; machines for processing metals, 2.6 times; mining and metallurgical machines and equipment, 1.3 times; machines for exploiting and processing wood, 5.5 times; machines and equipment for light industry and food industry, 1.8 times; agricultural machines, 2.7 times; railroad

rolling stock, traction machines, and trolleybuses, 6.6 times; maritime and sea vessels, 3.8 times; medical apparatus, tools, and instruments, 2.6 times; spare parts, 2.5 times, and others. The machine-building industry produces over 15 types of machines for processing metals, more than 10 types of diesel motors of 65 horsepower, tens of types of agricultural machines, and others. Most of the machines necessary for the mining and coal industry are produced in the Bulgarian machine-building plants. The machine-building industry produces a large number of machines and equipment for the metallurgical, chemical, textile and food, wood, and electrical power industries, for transportation, construction, as well as metal consumer goods.

Aside from tractors and trucks, agriculture receives all the other machines and equipment, as well as the necessary spare parts, from the machine-building industry.

On the basis of the results achieved thus far, great perspectives for the rapid rate of development of the metallurgical and machine-building industry are emphasized in the report presented by comrade G. G. Jivkov, first secretary of the Bulgarian Communist Party's Central Committee, to the Third Session of the Grand National Assembly, for the rapid increase of national economy, for raising the material and cultural standard of living, and for the reorganization of state and economic leadership. This objective is very clear. The faster the rate of industrialization of the country, the faster will be the implementation of the construction of socialism, and the faster will be the growth of the demand for metals, machines, and equipment. If in 1957, the Bulgarian People's Republic was in need of about 460 thousand tons of rolled ferrous metal, the necessities, in 1959, increased to about 560 thousand tons, and will increase to over 770 thousand tons in 1962. According to some preliminary calculations, the Republic of Bulgaria will be in need of 1,300,000 tons of rolled ferrous metal, in 1965. It is understood that these statistics are guiding data, and will be corrected upon the rapid development of the entire Bulgarian national economy, during the following years. But, even these guiding data are sufficient to emphasize the tremendous importance of the decisions of the January 1959 Plenum of the Central Committee of the Bulgarian Communist Party concerning the decisive jump in the metallurgical industry.

At the basis of the development of Bulgarian metallurgy, is its own raw material. As a result of some deep geological and mining research, important reserves of ores for ferrous and non-ferrous metals have been discovered. In general, the industrials and iron ore reserves of the country represent about 300 million tons, of which 250 million tons are from the deposits in Kremikovtsi. These ores are sufficient to ensure the production of the future metallurgical combine in Kremikovtsi and of the "Lenin" metallurgical plant in Kimitrovo, for about 50-60 years. Parallel with this, is the fact that there still exists in Bulgaria even other iron ore sources, with great possibilities of being enlarged.

Concerning the other raw material - coke - there are possibilities of covering about two-thirds (2/3) in the necessities of the iron and

steel capacities planned for commissioning. About 30 million tons of coking-coal reserves have been discovered, and it is expected that these reserves will increase to about 40 million tons for the Third Five-Year Plan. With these reserves, it is possible for coke production to reach about 700 thousand tons annually. Over 1,000,000 tons of coke are necessary for the production of 1,200,000 tons of pig iron (which is planned for 1960). But, it is evident that this amount of coke is wanting, and eventually will be imported, or new sources will be sought. In this situation, when the cost price of electrical power decreases considerably, experts will have the future problem of resolving the organization of pig iron production outside of the blast furnace.

The report of comrade Todor Jivkov points out that the production of pig iron in 1962 will reach about 230 thousand tons, and in 1965, about 700 thousand tons. Also, in 1962 and 1965, the production of steel will increase to 400 thousand tons and 900 thousand tons, respectively, and the production of rolled ferrous metals, 320 thousand tons and 700,000 thousand tons. These figures point out that in the next 7 years, the Bulgarian metallurgical industry will truly make a giant jump in its development. This will permit covering over 50 percent of the country's necessity of ferrous metal.

Together with the development of the iron and steel industry, the development of non-ferrous metallurgy will continue at a rapid rate. In 1965, the production of lead is provided to be about 90 million tons, of zinc over 50 million tons, of electrolytic copper about 25 million tons. Non-ferrous metallurgy, also, will develop on the basis of its raw materials. The industrial reserves of ore, zinc, and lead have attained, at the present, over 50 million tons, and in the future, an increase of yet 50 million tons will be achieved. According to the present development of non-ferrous metallurgy, the enterprises of lead and zinc, in the following years, will be ensured ores for about 40-45 years, which is considerably greater than the average production of lead and zinc of the whole world.

The efforts of the experts on copper ores, which are relatively poor in metal content, will be directed in the most economical exploitation of the deposits, and in the processing and application of new technological procedures for enriching and extracting metal from the ores. The largest reserves are found in the deposits in Medetsko - 180 million tons - with possibilities of discovering other important reserves. In connection with this, a new method introduced by the Bulgarian metallurgical experts is very important for extracting copper from the lead and zinc concentrates by means of a flotation series in the country. The extraction of copper from lead and zinc concentrates, which until the present has not been applied, will increase about two-thirds ( $2/3$ ) compared with the quantity of copper extracted thus far in Bulgaria.

The economic jump, which is provided to be made in the following years, emphatically points to the acceleration of the development rate of the machine-building industry. The Bulgarian machine-building industry is confronted with the problem of ensuring a large number of machines and equipment for all the national economic branches in the near future.

Certainly, the construction of machines in Bulgaria will continue to develop on the basis of specialization and cooperation with the other countries of the socialist camp, depending on the conditions and necessities of national economy. This means that a series of machines will be imported. In the following years, the machine-building industry will be directed more to the production of machines for the chemical, textile, and food industries, and extraction of ores, as well as for fulfilling the needs of agriculture. In specializing and cooperating with the other socialist countries, the electrical engineering industry will continue to produce electric motors, transformers, electric cars, and other similar machines and equipment, as well as electrical engineering apparatus for the needs of the population.

The rate at which the national machine-building industry will develop in the following years, is seen in the following data. If in 1957 the republican machine-building and metal processing industry yielded a production worth 2,941,000,000 leva, then a production worth about 11 billion leva is provided for 1962, and will attain about 18 billion leva in 1965. This means, that for a period of 8 years, the production of the machine-building and metal processing industry will increase by about 6 times.

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RUMANIA

DEVELOPMENT OF THE METALLURGICAL AND  
MACHINE-BUILDING INDUSTRY IN 1960

Following is a translation of an article in the Rumanian-language periodical Metalurgia si Constructia de Masini (Metallurgy and Machine-Building), Bucharest, Vol. XII, No. 2, February 1960, page 97-98.

The provisions of the 1960 State plan determine a powerful increase for Rumanian industrial production. These provisions, which will be included in the Six-Year Economic Plan, during its execution, are based on the results obtained thus far in the development of Rumanian socialist industry.

In 1959, Rumanian industry obtained significant achievements. These achievements created the foundation necessary for the development of the economic activity under better conditions, during the first year of the Six-Year Economic Plan, and for the realization of a more rapid increase of industrial production.

The 1959 State plan, in conformity with the preliminary data, was not only fulfilled, but overfulfilled in the main basic indicators, that is, production, labor productivity, and cost price.

Within the Ministry of Heavy Industry, the Directorate General of the Precision Mechanics and Electrical Engineering Industry fulfilled its plan by 102.1 percent, the Directorate General of Iron and Steel, by 105.6 percent, and the Directorate General of Machine-Building, by 104.5 percent.

Important achievements obtained by the workers of the Rumanian machine-building industry are based on the realization of the measures established by the November 1958, and the July 1959 Plena of the Central Committee of the Rumanian Workers' Party. These measures have given a great impetus to the creative initiative of the masses to use production capacities to better advantage, to shorten the time for executing investment projects, and to economize on materials and raw materials. The workers in the Rumanian metallurgical and machine-building industry have intensified the mobilization of some new material and financial reserves existing in enterprises, to increase state accumulations.

In the intensive development of the socialist movement for reducing the input of raw materials, fuel and power, the workers, engineers, and technicians of the Ministry of Heavy Industry enterprises have achieved savings of 396 million lei above plan, in the first ten months of 1959. In the metallurgy-producing enterprises, savings of about 4,500 tons of metal of standard products only, have been economized through the state plan. This savings is equivalent to the metal necessary for producing about 1,200 tractors or 1,100 trucks. The important achievement of above plan savings have shown the extensiveness of the reserves of the numerous enterprises and of the whole Rumanian national economy. Thus, for example,

the workers, technicians, and engineers at the "1 May" plant in Ploiesti, who have committed themselves to achieve 2.6 million lei of above plan savings, have obtained 5.3 million lei of additional savings in only the first ten months of the year. Also, instead of the 3 million lei to which the Metallurgical Works in Tirgoviste committed itself, 8.3 million lei have been achieved.

These achievements fully prove the justice of the measures decided by the November 1958, and the July 1959 Plena of the Central Committee, concerning the improvement of the economic activity, the acceleration of the development rate of the economy, and the more intensive exploitation of the material and monetary reserves, as well as the increase of the workers' standard of living.

The important results, which have been achieved, have made it possible, in agreement with the 1960 draft of the state plan as arranged by the State Planning Committee based on the directives of the party leaders, for the establishment of an important increase of industrial and agricultural production, of an increase of the sales' volume of goods through socialist trade, and of an increase of the number of salaried workers, technicians, and engineers in the national economy.

The national income has been provided to increase by 12.5 percent compared with 1959. Also, about 20 percent will be distributed to the accumulation fund and about 80 percent to the consumption fund.

The large increase of the investments, as well as the further application of the measures for improving the standard of living, reflects the judicious distribution of the national income.

Eighty percent of industrial investments, which represent 59 percent of total investments, will be used for developing the basic branches of the national economy, namely, about 39 percent for the power and fuel industry, about 19 percent for iron and steel, non-ferrous metallurgy, and the machine-building industry, and 21 percent for cellulose and rubber processing in the chemical industry.

The important production capacities of the fourth coke battery and of the fourth open-hearth furnace in Hunedoara will be commissioned.

Construction will begin, also, on some new industrial objectives, as the new furnace section at Hunedoara, new mines, and others.

Commissioning some new production capacities and improving the use of the present capacities, will ensure an increase of 14 percent in the 1960 industrial production. The production of the means of production has been provided to increase by 14.6 percent compared with 1959, and the production of consumer goods, with an enlarged base of internal raw materials available, will increase by 13 percent.

In 1960, the production of the iron and steel industry will increase by over 28 percent, of machine-building, by 17 percent, of the chemical industry, by 22 percent, and of the electric power and heat industry, by 20 percent.

The machine-building industry has become an important industrial branch. This industry is greatly expanding in order to equip the developing Rumanian economy with highly technical machines and equipment,

and to build up the reserves necessary to enlarge economic exchange with the socialist camps, on the basis of furthering socialist international division of labor, as well as with the other countries which appreciate Rumanian-made machines and equipment.

Production increase of some main machines and equipment in 1960, compared with 1959, is remarkably rapid.

Thus, provision has been made for the production of 76 percent more drilling rigs, 45 percent more tractors, 47 percent more cereal combines, 42 percent more lathes, 84 percent more light equipment, and 143 percent more equipment for the chemical industry.

The Rumanian machine-building industry and agricultural equipment will equip agriculture with a large number of tractors and improved agricultural machines. This equipment will contribute to the enlargement of the agricultural technical-material base of production.

Also, many machines and equipment of a high industrial level will be produced, in order to strengthen and modernize the technical-material base of production of the other branches of the economy, as, for example, the electric power industry, the mining industry, construction, transportation, and others.

The Rumanian machine-building industry will adopt new types of high industrial machines, equipment, and apparatus, as 50-ton drilling-rigs for depths up to 1,200 meters, which are transportable and have transformers, 8-inch and 210-atmosphere hydraulic eruption preventors, 70-atmosphere gas and crude oil separators, 700-horsepower, 12-cylinder diesel motors with superfeeders, and other equipment.

In view of producing the machines, equipment, and apparatus necessary in economical series, at a high level of quality and in the best conditions, the Ministry of Heavy Industry will influence some machine-building enterprises, which are subordinate to other ministries and central organs, as well as to organize those enterprises which will continue to belong to other departments.

The technical level of production in the machine-building industry will be raised through the following means: by more profound production specialization; improvement of cooperation between the enterprises; manufacture of new highly industrial products; modernization of the present machines and equipment; replacement of the old machines and equipment with the other modern ones of high productivity; the introduction on a large scale of mechanization and automation of production; organization of continuous production; application of improved technological processes; extension of advanced production experience; and the continual raising of the professional qualification of the workers in the machine-building industry.

In his speech concerning the 1960 plan presented at the 3-5 December 1959 Plenum of the Central Committee, comrade Gheorghe Gheorghiu-Dej emphasized that "the more intense use of the equipment of the enterprises, the more efficient utilization of the present areas, constitute the important sources in view of increasing production capacities with the minimum of investments, and of freeing the funds for constructing new plants and factories".

Concerning the improvement of the use of production capacities, important achievements were obtained in 1959. Thus, for example, the usefulness of the aggregates in the iron and steel industry increased by 13 percent in the blast furnaces, by over 25 percent in the open-hearth furnaces, and by 7 percent in the rolling mills in operation.

More than half of the increase of steel production obtained last year was ensured by improving the utilization of production capacities.

In 1960, merely on the condition of improving the iron and steel aggregates, an increase of the production of about 70,000 tons of pig iron, 170,000 tons of steel, and 115,000 tons of rolled metals and tubing will be achieved.

By ensuring the processing of steel production, as provided, the rolled-metal workers will place the necessary quantities, types, and qualities of rolled metals at the disposition of the machine-building industry, and of the other branches of the national economy.

A result of the unjustifiable spending of some investment funds, and of the uneconomical use of working area and production equipment in the machine-building industry, has been that almost all the ministries have constructed their own units for building machines. This is a tendency towards autonomy, a condition which strangles the possibilities of cooperation and specialization in production.

The statistical data of 1959 have shown that the machine-tools at the mechanics' shops of the Ministry of Agriculture have had an input of about 30 percent less than that in the machine-building enterprises of the Ministry of Heavy Industry.

Also, from studies arranged on the basis of the indicators of the party leaders, important capacities have become available to the workshops of the railroad department, due to the improvement of organizing repairs. The furnishment of new equipment and the more complete use of the machines and production areas, the increase of exchanges and the organization of repairs with spare parts, makes it possible for some workshops with a productive area of about 70,000 square meters to be transferred and organized into machine-building factories.

The utilization indexes of the machine-tools in the enterprises of the Ministry of Heavy Industry are higher than those achieved in the machine-building enterprises which belong to the other ministries.

Also, in some units, small repairs are accomplished uneconomically, and under unsuitable technical conditions. The accomplishment of repairs in an organized system, with continual repairs using modern methods of work and spare parts, can ensure important savings by reducing the volume of capital repairs, and by prolonging the work time on the machines.

In his speech concerning the 1960 state plan presented at the 3-5 December 1959 Plenum of the Central Committee, comrade Gheorghe Gheorghiu-Dej pointed out that "the Ministry of Heavy Industry will have to determine improved standards and to organize industrial administration for repairing machine-tools, electric-motors, transformers, internal combustion engines, pumps, ventilators, and others, by using the present capacities of all the enterprises of the ministries and of the people's councils".

In view of better organizing production and of raising the level of technology in the Rumanian machine-building industry, the Ministry of Heavy Industry will draw up concrete measures which will ensure a task suitable to each of the units, indifferent to the central organs to which the units belong.

Raising the production of machines and equipment to an advanced technical level, is the continual duty of the Ministry of Heavy Industry, of the planners and technologists, of all the workers, engineers, and technicians in the Rumanian machine-building industry.

In developing the production capacities of the machine-building industry, the material and financial efforts will be concentrated to ensure the achievement of the machines necessary for the technical re-equipment of the enterprises.

Also, the consideration for increasing production, the enlargement of sorts, the improvement of quality, and the reduction of the cost price of machines and equipment to be exported, will be intensified.

The fulfillment of the many tasks of the machine-building industry necessitates obtaining a rapid increase of labor productivity, and reducing the input of raw materials, materials, power, fuel, and other production expenses. In 1960, labor productivity in Rumanian industry will increase, as provided for, by 11 percent, compared with 1959.

With the increase of labor productivity, industrial production has been determined to increase by 80 percent.

Labor productivity in the machine-building industry of the Ministry of Heavy Industry has been provided to increase by over 14 percent, and therefore a large part of the annual increase will be achieved by the rapid increase of labor productivity.

Also, by reducing the cost price and operating expenses for all of the branches in the economy, a volume of savings of about 5.2 billion lei, will be achieved, that is, three times more than that achieved in 1958.

In the machine-building industry, there are important means for reducing the consumption of metal by replanning and modernizing some machines and equipment, and by introducing into production advanced technological procedures, which will raise the utilization index of metal.

Reduction of the specific consumption of rolled metals in the processing industry is provided to be at least 6.3 percent. The analysis made on the main machines and equipment produced in series by the Ministry of Heavy Industry, has shown that a reduction of the consumption norms by over 7 percent is possible, compared with the indexes achieved in 1959. This will ensure a savings on metal from which 16,000 trucks, or 24,000 tractors could be made.

In view of decreasing the specific consumption of raw materials and materials, the Ministry of Heavy Industry will take measures to extend consumption norms, established on a technical-scientific basis, over a wider range of the serial products which will be manufactured.

In the machine-building industry, more economical management of metals will be ensured, decisive action for reducing the consumption

norms will be developed by replanning, improvement, technology, organization of cutting and utilization of the wastes, development of creative initiative, and application of more innovations and good ideas in production.

Thus, for example, the consumption norms for rolled metals are provided to be reduced by 7 percent.

At the "Clement Gottwald" Works only, a more rational utilization of materials will ensure a savings of 2.25 tons of silicic sheet metal, which represents a 14 percent reduction of the consumption norm.

A decisive consideration for all the enterprises of the metallurgical and machine-building industry, is a more complete discovery and exploitation of the internal reserves in order to ensure the achievement of more savings, the rapid increase of labor productivity, and the reduction of the cost price of products. The groups of workers, technicians, and engineers in the metallurgical and machine-building industry are greatly developing the onward movement of socialism, and are developing the creative initiative necessary for a large contribution to the construction of socialism and for continually raising the material and cultural standard of living of the Rumanian workers.

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## RUMANIA

### DEVELOPMENT OF RUMANIAN METALLURGY

Following is a translation of an article in the Rumanian-language periodical Metalurgia si Constructia de Masini (Metallurgy and Machine-Building), Bucharest, Vol. XII, No. 2, February 1960, page 179-180.

The 3-5 December 1959 Plenum of the Central Committee of the Rumanian Workers Party pays attention, in its documents, to the development of the iron and steel industry, by means of a series of constructive figures for such development.

Comrade Gheorghe Gheorghiu-Dej pointed out in his speech that, in 1959 compared with 1958, the degree of usage of the blast furnaces increased about 10 percent, the Siemens-Martin furnaces, over 20 percent, and the rolling mills in operation, by 7 percent. This helped the production of pig iron to increase over 100,000 tons, steel, around 460,000 tons, and rolled metals and tubing, around 250,000 tons.

In the 1960 draft state plan, provision is made for an increase of the production of iron and steel by over 28 percent.

An increase of production of about 70,000 tons of pig iron, 170,000 tons of steel, and 115,000 tons of rolled metals and tubing will be achieved, only by the improvement of the usage of metallurgical aggregates.

It must be emphasized that, in general, during the years of the people's power, the increase of metallurgical production has been accomplished, in the first place, through the construction and commissioning of a large number of new and modern aggregates, which contributed to raising the technical level of this branch.

The increase of the technical level of the metallurgical industry is due, especially to the construction of large new aggregates, and to the concentration of metallurgical production, especially at Hunedoara and Resita. The production of the blast furnaces increased from 256 cubic meters to 450 and 700 cubic meters, respectively, and the production of the Martin furnaces from 60 tons to 120 and 185 tons, respectively, and the electric steel furnaces from 5 tons to 20 tons.

At the same time as the new aggregates, the increase of the sizes of the present ones, and the mechanization and automation of production, the technological processes were continually perfected and the organization of production was improved.

The achievements obtained during the years of the people's power is statistical evidence of the rapid and continual rate of pig iron, steel and rolled metal production.

#### Pig Iron:

The average production of pig iron has developed and is developing in a continually ascending rate (as shown in graph below), which in

1960, compared with 1950, will reach about 300 percent, through the increase of the utilization indexes and the increase of the productivity of the aggregates, through the utilization of self-fluxing sinter in the blast furnaces, through new technological procedures, as the use of methane gas in blown air, the flowing of air with constant humidity, the increase of blown air to over 800 degrees in the blast furnaces. To ensure the necessary raw material, the production of iron ore will reach 1.4 million tons, that is, an increase of 27 percent based on the development and the reconstruction of the present units.

#### Steel:

In 1960, the production of steel will be 1.7 million tons, which is an increase of 22 percent, compared with 1959, or 3.06 times, compared with 1950.

The increase of steel production is dependent on the improvement of the usage of the present equipment, as well as on the production capacities commissioned this year at the Resita Metallurgical Combine.

#### Rolled Metals:

In 1960, the production of finished rolled metals will be 1,140,000 tons, which is an increase of 51 percent, compared with 1959, or 2.8 times, compared with 1950. The production increase will be achieved by new aggregates from Hunedoara and from "Nicolae Cristea" Works at Galati (which was commissioned during the second quarter of 1959), as well as by fuller utilization of the other rolling mills.

In 1960, the production increase of pig iron, steel, and rolled metals will be supported even by the commissioning of some new capacities, and the enlargement of the present capacities, along with the improvement of the usage of the metallurgical aggregates. In contribution to this, about 19 percent of the total industrial investments will be allocated to the iron and steel, non-ferrous metallurgical, and machine-building industry.

During 1960, provision is made for the commissioning of the fourth coking battery, of the fourth Martin furnace, at Hunedoara, and others. Also, provision is made for the construction of some new industrial objectives, as the new section of the blast furnace at Hunedoara, new mines, and others.

The iron and steel workers, as in the past, will increase their labor and make the most of the production capacities and the advanced technique, to implement the task outlined by the party, and thus to contribute to the progress of the entire national economy. In this way, they will yield a production of 1,700,000 tons of steel.

FIGURE APPENDIX

