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SOURCE Newspapers and periodical as indicated.

USSR STEEL PLANTS MEET 1949 GOALS;
STALINO PLANT ADOPTS NEW COKE

[Numbers in parentheses refer to appended sources.]

Toward the end of December, many major metallurgical plants reported completion of both the 1949 year plan and the current Five-Year Plan, and, in general, production figures topped 1948 levels.

In Dnepropetrovsk Oblast, 20 plants and mine administrations of the Ministry of the Metallurgical Industry have completed the 1949 plan ahead of schedule. (1) The Nikopol' Pipe Plant completed the 1949 pipe-production plan on 20 December. Production has increased 150 percent over the prewar level. (2) The Novo-Moskovsk Tin-Plate Rolling Plant has fulfilled the 1949 production plan and has increased output 20 percent over 1948. Additional tons of thin sheet and roofing iron will be produced by the end of the year. The plant is now operating at a profit. (3)

The Dnepropetrovsk Steel Structures Plant imeni Molotov completed the Five-Year Plan for output of finished goods and for gross production on 29 December and at the same time completed the 1949 year plan. This year the plant has produced as much in structural products as it did in 1940, and in both 1944 and 1945 together. The plant has successfully fulfilled the order for steel structures for the high buildings being built in Moscow and also started production of walking excavators this year. (4)

The Metallurgical Plant imeni Dzerzhinskiy in Dneprodzerzhinsk has achieved a coefficient for capacity utilization of the blast furnace of 0.82 as compared with the norm of 0.84. For 11 months of 1949, the coefficient has averaged 0.88 as compared with the 1948 coefficient of 0.91. The average recovery of steel per square meter of furnace hearth was increased by 500 kilograms this year (5) and a record high yield of 6.35 tons per square meter was achieved in furnace No 3 of the open-hearth shop. The norm for steel recovery is 4.75 tons. Furnace No 3 has been operated for 403 melts without major repair, and furnaces No 8 and 11 have been

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generated for 400 and 380 melts respectively, instead of the norm of 250 melts. (6) In 11 months of 1949, the hourly productivity of the rolling mills increased 13 percent. (5) As of 31 December, the plant was producing rolled metal in excess of the 1949 plan. (7) The plant's rolling mills have also been fulfilling orders for steel for the construction of Moscow buildings. Forty carloads of rolled steel from the plant arrived in Moscow on 29 December. (8)

In Stalino Oblast, the Stalino Metallurgical Plant imeni Stalin (director, K. Baranov) has completed the 1949 plan for the entire metallurgical cycle. This year, the plant has produced 27.6 percent more pig iron, 22.1 more steel, and 32 percent more rolled metal than in 1948. (9) In 11 months of 1949, the plant increased output 32.7 percent over 1948, including 31.3 percent for smelting pig iron, 17.9 percent for steel smelting, and 32.5 for rolled metal production, while labor productivity increased 24.6 percent. In 1948, the plant incurred deficits and needed state subsidies, whereas in 10 months of 1949, it realized almost 5 million rubles in accumulations above plan. By 5 December, steelworkers and the "400" rolling mill had achieved the 1950 production level. (10)

In the open-hearth shop, steelworkers are now obtaining an average of 5.05 tons of steel per square meter of furnace hearth, 700 kilograms above the yield planned for 1950. (11) The shop's schedule for completion of one melt calls for 9 hours, but high-speed workers are completing melts in 7-8 hours. (9)

The plant's successes have been the result of improved technology introduced in 1949. Following introduction of automatic control in the operation of blast furnaces No 1 and 3, the regulation of the temperature of the hot blast in furnace No 2 was made automatic this year. This furnace was equipped with all necessary control and measuring instruments. Neutralization of the ores helped to improve furnace operation and to increase the quality of the pig iron. In the second half of 1949, with the aid of the Stalino Coke-Chemical Plant, blast-furnace workers developed a coke from a 3-component charge without using Type "K" (coking) coal. (10) The plant was the first in Stalino Oblast, after the coke-chemical plant, to replace scarce coking coals with gas coals, and the workers have achieved uniform and highly-productive operations on the new coke, a fact which is of tremendous significance to the state. As of 25 November, the plant had achieved a coefficient of 0.96 for utilization of blast-furnace capacity, as compared with the planned coefficient of 0.99. The workers have also developed a new method of repairing the Cowper stoves whereby repairs are completed in 2 weeks instead of the usual 2 months. (12)

Open-hearth furnaces No 3 and 4 have been made completely automatic. A suspension roof (rasporno-podvesnoy svod) of refractory material was installed in No 4 and the furnace run between repairs increased by 150 melts. Repairing the furnaces with dolomite is now done by machine instead of by hand. The machine was designed by plant engineers and was built in the plant. A new method of cooling the parts of the open-hearth furnaces is now being used for the first time. These parts often burned out from the effects of the extremely hard water, and much time was consumed in replacing them. In addition, while these parts were being replaced, the furnace brickwork was often damaged because of mechanical defects or because water had fallen on it. The caissons (kesson) of the furnace had to be replaced once or twice during each furnace run, taking 4-6 hours to complete the replacement. With the new cooling system, the caissons are replaced only once during every two or three furnace runs when cold repairs are made. The new cooling method has also made it possible to replace the arched anterior furnace walls with nonarched walls, thus increasing their durability. It has been found practical to eliminate the one or two hot repairs during the course of the furnace run, and this also has resulted in a sharp increase in the productivity of the furnace installations.

New technology has also been introduced in the rolling mills. Both soaking pits in the section rolling shop have been converted from solid fuel to gas for heating, thus improving the heating of the metal and the productivity of the mills, and the

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soaking pits no longer constitute a bottleneck. Formerly, the soaking pits retarded the operation of the blooming mill. The brickwork of the pits was quickly burned through and needed repair. Engineer Kodryanskiy proposed that the chamotte brick be replaced in the arch and walls of the pits. This proposal was put into effect and the durability of the pits greatly increased. Repair of the pits is now a rare occurrence in the large-section rolling shop and soaking of the ingots no longer delays operations. Shop productivity has substantially increased.

Another problem faced by the plant was to find a way to increase the yield of finished metal from each ingot. After reviewing all the possibilities of the open-hearth shop, the foundry, and the large-section rolling shop, it was decided to increase the weight of the ingot from 2,850 kilograms to 3,100 kilograms. The profile of the ingot was also changed, thereby making it possible to save up to 40 kilograms of metal per ingot and to obtain one additional ingot from each melt. (10)

On 28 December, the Yenakiyev Metallurgical Plant, Stalino Oblast, completed the 1949 plan for the entire metallurgical cycle. (13) The highest recovery of steel for the plant is now 9.08 tons per square meter of furnace hearth as compared with the planned 5.11 tons. (14)

A worker at the Makeyevka Metallurgical Plant imeni Kirov has achieved a coefficient of 0.84 for capacity utilization of a blast furnace, as compared with the planned 0.92. This is the best coefficient for blast-furnace utilization yet achieved in Stalino Oblast. (6)

The "Azovstal'" Plant, also in Stalino Oblast, completed the Five-Year Plan for volume of production on 30 November (15) and by 31 December was producing rolled metal in excess of the 1949 year plan. (7) A new norm for smelting has been adopted in the plant. The former record melts of 8-9 tons per square meter of furnace hearth in 14 hours have now become the norm for every steelworker. All brigades are obtaining at least 9 tons per square meter of hearth. (16) The postwar record for volume of steel obtained per square meter is now 11.9 tons, achieved recently by one worker. (12)

On 3 December, the Metallurgical Plant imeni Voroshilov in Voroshilovsk completed the Five-Year Plan for volume of production. Since the beginning of 1949, the plant has increased metal smelting 66.4 percent, has achieved the 1950 level for smelting pig iron, and has saved 4,600,000 rubles. (17)

The "Zaporozhstal'" Plant has completed the 1949 plan for the entire metallurgical cycle and now exceeds the prewar level in every phase of the cycle. (18) The Stalingrad "Krasny Oktyabr'" Metallurgical Plant had completed the 1949 plan for the entire metallurgical cycle by 26 December (19) and the Taganrog Metallurgical Plant, Rostov Oblast, has completed the 1949 gross-production plan. (20)

In the Urals, enterprises of "Glavuralmet" [Main Administration of the Ural Metallurgical Industry?] completed the 1949 plan for the entire metallurgical cycle on 28 December. Output of steel, pig iron, and rolled metal was considerably above the level planned for 1950. In 11 months, these enterprises saved nearly 20 million rubles above plan by reducing production costs. (21)

The Magnitogorsk Metallurgical Combine, Chelyabinsk Oblast, has exceeded the 1949 plan for the entire metallurgical cycle, including output of steel, pig iron, rolled iron, and coke and the mining of iron ore. (22) Electrification of intraplant transport at the combine has proved to be a significant step in improving its operations. It was of particular importance in enabling the combine, to a large degree, to overcome winter operating difficulties. The combine has now completed the Five-Year Plan both as to volume and rate of production of steel, rolled metal, coke, and ore mining, and expects to complete the Five-Year Plan for smelting pig iron by the end of December 1949. In fact, this year, the blast furnaces will have produced as much pig iron as was planned in the Five-Year Plan for 1950, which is even more significant in light of the fact that the plan called for greater furnace capacity in 1950.

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In 1948, blast-furnace workers achieved a coefficient of 0.90 for capacity utilization of the furnaces. That is, one ton of pig iron was produced for every 0.90 cubic meter of furnace capacity. The planned coefficient for 1948 was 0.95 and the pledged coefficient, 0.91. This year has seen even further improvement. With the planned coefficient at 0.87, in October 1949 workers achieved a coefficient of 0.85.

Steel production has also increased. In 1948, the planned yield of steel for each square meter of hearth of an open-hearth furnace was 5.95 tons. The Magnitogorsk steelworkers in the second half of 1948 brought the yield to 6.03 tons, and this year, in October, a new high of 6.92-6.98 tons was reached. (23)

The Zlatoust Metallurgical Plant imeni Stalin, Chelyabinsk Oblast, has completed the Five-Year Plan for volume of open-hearth steel production. (24) The plant had completed the 1949 plan by 21 December. (25) The year 1949 has been a period of wide-scale mechanization of steel-smelting processes and rolling-mill production at the Zlatoust plant. A new structure for open-hearth roofs of heat-resisting and chromomagnesite brick has been developed and put into service, increasing the furnace run between repairs as much as six to eight times the former run. (26) The plant has exceeded its pledge to increase the progressive norm for recovery of steel per square meter of open-hearth furnace hearth to 5 tons. In 1948, the progressive norm of 4.5 tons was adopted at the conference of metallurgists of the Urals and the East. In 1949, the plant has increased the average progressive norm to 5.1 tons. (27)

The plant's supply of scrap should soon be improved. The "Vtormet" (scrap metal) Plant in Chelyabinsk Oblast is taking measures to improve its operations after being criticized for delays in supplying reprocessed metal scrap to the Zlatoust and other plants in the oblast. The plant's directors and the directors of the oblast office of "Vtormet" were called to a conference with workers in Chelyabinsk metallurgical enterprises, at which concrete measures for improvement were decided upon. (28)

Also in the southern Urals, the "Cherbukul" and Asha metallurgical plants have completed the 1949 plan. (29) The Beloret'sk Metallurgical Combine, Bashkir ASSR, completed the 1949 plan for the entire production cycle on 26 December. This year, the combine has topped all its previous production records in steel, pig iron, and rolled metal. (29)

The Novo-Tagil'skiy Metallurgical Plant, Sverdlovsk Oblast, completed the 1949 plan for the entire metallurgical cycle on 5 December (8) and for gross-production on 18 December. (30) The plant's blast-furnace workers are now obtaining one ton of pig iron per 0.83 cubic meter of blast-furnace capacity as compared with the coefficient of 0.94 held at the beginning of 1949. (31)

The Nizhnyy-Tagil Metallurgical Plant achieved a coefficient for capacity utilization of the blast furnace of 0.90 in November, but a leading brigade has since obtained an average coefficient of 0.67, a record for the plant. The blast furnace shop is now producing 20-30 percent above the plan. (30)

The Gur'yevsk Metallurgical Plant, Kemerovo Oblast, completed the 1949 plan on 21 December (32) and the Kuznetsk Metallurgical Combine in Stalinsk completed the 1949 plan for steel smelting on 27 December. The combine's steel production has substantially increased over 1948. The average recovery of steel per square meter of hearth has been increased 320 kilograms over last year. (33)

The Kazakh Metallurgical Plant, Temir-Tau, has completed the 1949 plan for the entire metallurgical cycle. Production of commercial rolled metal has increased 50 percent over 1948 and steel output has also increased substantially over last year's output. (34) The plant's rolling-mill workers each rolled an average of 620-625 ingots per shift during the pre-October competition, the highest record yet achieved at the plant. (35)

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The Aktyubinsk Ferroalloy Plant, Kazakh SSR, completed the 1949 smelting plan on 2 December. By October, the plant had exceeded the 1950 production level, and this year has saved more than 5 million rubles. (36)

The Uzbek Metallurgical Plant (director, I. Mukhamedov) in Begovat completed the 1949 plan for steel output and rolled-metal output on 25 December. (37) In 8 months of 1949, the plant produced as much metal as was smelted during all of 1948. The plant has attained the 1950 production level in all phases of metallurgical operation. Rolling-mill workers have mastered production of 35 different profiles, enabling them to increase productivity and to decrease production costs by 50 percent. The continued improvement in work methods will soon enable the plant to operate at the full planned capacity. Uzleks who were formerly employed in constructing the plant are now working as foremen, rolling-mill operators, steelworkers, etc. Some 957 persons of local origin have been trained in these mass professions. (38)

In Moscow, the "Serp i molot" Plant has exceeded the pledges made by its workers in honor of Stalin's birthday, 21 December. The plant has produced 15 million rubles' worth of additional production instead of 14 million, smelted 8,000 tons of steel above the 1949 plan instead of 6,500 tons, and obtained 7.96 tons of steel per square meter of furnace hearth instead of 7.5 as pledged. (39) The plant has also produced 6,500 tons of rolled metal above the 1949 plan. (40) The recovery of steel per square meter of furnace hearth for the plant as a whole during 1949 increased 17 percent over 1948. (41) Other records are being set at the plant. According to the schedule, the "750" mill should roll 59 ingots per hour, whereas leading rolling mill operators have rolled as many as 80 per hour. (42)

The "Elektrostal'" Plant in Moscow Oblast completed the 1949 plan for the entire metallurgical cycle on 27 December. (43) Smelting of metal at the plant has increased 48 percent over the prewar level. (44) The plant's leading shop, the first steel-smelting shop, has exceeded the prewar level for steel output by 48 percent, operating with the same number of furnaces and the same capacity for each furnace as in the prewar period. The shop has also saved many tons of tungsten, molybdenum, and nickel by decreasing production defects and reducing consumption of these alloys. (45)

The Leningrad "Lentrublit" (pipe-casting) Plant, first in the city to produce cast-iron tubing for the Leningrad Subway, now machine processes, as well as casts, tubings. Production experts recently prepared a device which facilitates the processing of tubing for wheels 6 meters in diameter. (46) Mikhail Stepanovich Savin, known as one of the city's best molders and long associated with the "Lentrublit" Plant, has made a radical change in the technology of casting iron tubing for the large sewer collector which was laid in Leningrad. The new method increased labor productivity 300 percent and saved 50 percent on metal and molding materials. Savin is now designing molds for cast tubing for the Leningrad Subway. (47)

The "Krasnyy metallurg" Plant, Liyepaya, Latvian SSR, has increased the average recovery of steel per square meter of furnace hearth in the open-hearth shop. The yield is now 5 tons per square meter for the plant as compared with the norm of 4 tons. Each melt is completed in at least 6 hours. (48)

The Mogilev Pipe-Casting Plant, Belorussian SSR, completed the 1949 plan on 14 December. Production of rolled metal, roofing tin, and water-main pipe for construction projects has increased 50 percent over 1948. (49)

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