

7

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50X1-HUM

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SOURCE Newspapers and periodicals as indicated.

PROGRESS REPORTED IN NEW SOVIET HYDROELECTRIC AND CANAL PROJECTS

[Numbers in parentheses refer to appended sources.]

In the Soviet press of 1 February - 3 March 1951, it is reported that progress is being made generally on the large construction projects and that norms are being exceeded. Mechanization is stressed in all phases of work and it is said that excavation work is nearly completely mechanized.

Excavation and construction work at the Volga-Don Canal, the most advanced of the construction projects, is said to be 90 percent mechanized.(1)

Huge walking-dragline excavators with a 14-cubic-meter bucket capacity and caterpillar-mounted shovel excavators with a 15-cubic-meter shovel capacity are in operation at the Kuybyshev GES and the Volga-Don Canal. These machines, supplemented by excavation pumps handling 3,000 cubic meters per hour, scrapers which carry 400-500 cubic meters of earth a distance of 150 meters in one shift, and other excavation machinery are making it possible to accomplish the enormous excavation tasks.(2)

Construction of the Volga-Don Canal, which, according to plan, will be put in operation in 1951, is well under way. A special administration for the operation of the canal has been set up in Rostov and shipbuilding plants in the country are making boats for the canal.(3) Construction materials are arriving at the rate of nearly 500 carloads daily at the Tsimlyansk Dam.(4), and the construction of secondary enterprises has been completed.(5) The latter include three repair shops, 11 large machine shops, seven automatic concrete plants with a total annual production of 1,760,000 cubic meters, and rock-crushing plants with a production rate of 1,600,000 cubic meters of crushed rock per year.(6)

In the region of the Volga-Don Canal, 392 kilometers of railroad and 468 kilometers of roads have already been built. Nearly 626 kilometers of high-voltage lines, 467 kilometers of low-voltage lines, and 1,227 kilometers of communications lines have been assembled (1), and over 1 1/2 million cubic meters of housing and public buildings have been built.(6)

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SECRETS-E-C-R-E-T

50X1-HUM

At the Tsimlyansk Dam, concrete is being poured at the rate of 3,000 cubic meters daily. New concrete plants are being built, and an automatic plant capable of producing 2,500 cubic meters of concrete daily is being put in operation.(7) Work on the locks is also proceeding rapidly. The excavation work on lock No 3 has been completed and concrete is now being poured. Three hundred meters of concrete are being poured daily here at the peak of winter, and construction crews exceeded the January plan for laying concrete in all sections.(6)

Canal excavation work is aided by the giant "Uralets" walking excavator which has a production norm of 2,000 cubic meters in 24 hours, and other similar machines.(8) Moscow Metro workers are aiding "Dontonnell'stroy" in digging a tunnel on the Main Don Irrigation Canal. The six-kilometer tunnel, designed to carry water for irrigational purposes, will be metal-lined and will have a capacity of 150,000 cubic meters of water per hour.(9)

As at the other projects, work continues day and night at the Kuybyshev GES construction project. So far, over 700,000 cubic meters of upper-ground layer have been removed and 260,000 cubic meters of sand laid along the left bank of the Volga where the earth dam will be constructed.(10) Three hundred meters from the right bank of the river, a rock fill, 500 meters long, is being constructed to still the water in the area where the foundation of the power-station building is being built. The rock fill will require 20,000 cubic meters of rock, of which 1,500 cubic meters have already been laid.(6) Excavations for the foundation of the hydroelectric station building itself have been started.(11)

At the Kuybyshev GES, 1951 will be a year of preparation for the concrete work to follow. Excavations will be made for the powerhouse, navigation locks, and spillway dam, while railroad lines and secondary enterprises will be completed. A huge automatic concrete plant like the one at the Volga-Don Canal will be built this year at the Kuybyshev GES.(12) Concrete will be transported from these automatic plants by a special conveyer capable of handling 1,000 cubic meters per hour. Concrete pumps capable of carrying concrete 250 meters horizontally or 40 meters vertically at a rate of 20 cubic meters per hour will also be used.

Powerful electric and pneumatic vibrators will settle the concrete and improve its quality. An original method of using 16 of these vibrators in groups will be applied. The vibrators will operate at 6,000 revolutions per minute and will be brought into position by special cranes. The vibrator aggregates will be able to lay 25-30 cubic meters of concrete per hour, and will require three persons to operate them, including the crane.(2) To facilitate freight handling, engineers of the "Soyuzprommekhanizatsiya" Trust, Ministry of Heavy Machine Building, have submitted plans for a cableway which will connect quarries, concrete plants, and the construction area of the locks.

Two cables will be suspended across the Volga on 100-foot-high masts located on either side of the river. The cableway will support cars carrying 2 tons of freight at a rate of three or four cars per minute. The trans-Volga cables will be nearly a kilometer long. Two cables, to be erected on the left bank for hauling sand and gravel to the concrete plant, will be one half kilometer long each.(13)

More workers are arriving at the Kuybyshev GES construction site. Kuybyshevgidrostroy has received over 15,000 work applications from people all over the USSR. Some have arrived at the construction site and another 1,000 are en route. Specialists have arrived from the Volga-Don construction project to teach various specialties to workers at "Kuybyshevgidrostroy." A division of the All-Union Scientific Engineering and Technical Society has been organized on the site to aid in the development of new techniques and to help conserve construction materials and electricity.(14)

- 2 -

S-E-C-R-E-T**SECRET**

SECRETS-E-C-R-E-T

50X1-HUM

Full-scale work is also being conducted on both sides of the Volga in the construction area of the Stalingrad GES. Work will start in June on the foundation of the electric-power-station building and on the navigation locks. Excavation work at the Stalingrad GES, exceeding that of the Dnepro GES 20 times by volume, will be 97 percent mechanized. Eighty percent of the excavation work will be done by hydraulic methods. A Stalingrad plant is making the largest excavation pump in the USSR for this construction project. The pump will be put into operation by 1 May. Tens of exploratory parties have worked at the construction site during the past several months. An evaluation of their reports confirms the fact that the choice of location for the dam is a good one. At present, plans for the construction of the electric-power-station building are being completed. The construction tempo at the Stalingrad GES is constantly increasing. Already thousands of workers are employed and many workers are being trained for skilled positions. Twenty thousand square meters of housing will be built at the Stalingrad GES in 1951.(15)

Expeditions of more than 600 workers and specialists from Gidroenergo-proyekt have been engaged in exploratory work along the Dnepr River. A commission of the Ministry of Electric Power Stations which determined the location of the Kakhovka GES valued highly the data compiled by these expeditions.(16) Secondary enterprises are being built at the Kakhovka GES construction site, as well as approaches to the area.(17) Over 1,000 workers and 100 trucks and tractors are engaged in building housing at the project, and the Khar'kov office of the "Gorstroyproyekt" has completed plans for the construction of a workers' village which will accommodate 25,000 inhabitants.(18) After the construction of the Kakhovka GES, the village will be located on the shore of the "Kakhovka Sea."(19)

Preliminary work has been started on the South Ukraine and North Crimean Canal. A construction and assembly administration has been formed in Zaporozh'ye and Melitopol' to build the first two workers' villages. One of these villages will be built near Zaporozh'ye, the other near the village of Terpen' in Melitopol'skiy Rayon. They will include 35,000 square meters of living space and will be built in 1951.(19)

Exploratory expeditions have been investigating three different routes for the South Ukraine and North Crimean Canal. Test drilling and topographical work are being conducted on the Molochnaya River and one group has been exploring the Perekop Isthmus. Several expeditions working in Nikolayev Oblast are to determine the location of a large pumping station on the Ingulets River.(20)

Two expeditions of over 800 men are working along the route of the Main Turkmen Canal. One of them is exploring the valley of the Uzboy River, the other a section between the Takhia-Tash promontory and the Sarakamysh depression.(21) A new town of 15,000 inhabitants is to be built several kilometers from the Takhia-Tash promontory to accommodate secondary enterprises of the Main Turkmen Canal project.(22)

The press has reported the following plants producing machines and materials for the construction projects:

<u>Enterprise</u>	<u>Remarks</u>
Magnitogorsk Metallurgical Plant	Shipped 25 carloads of high-quality iron to Tsimlyansk GES (23)
Yenak'yevo Metallurgical Plant	Shipped 2,400 tons of various rolled iron products to Volga-Don Canal project. (24)

- 3 -

S-E-C-R-E-T**SECRET**

SECRET
S-E-C-R-E-T

50X1-HUM

<u>Enterprise</u>	<u>Remark</u>
Krasnyy Sulin Metallurgical Plant	Producing metal for Volga-Don Canal (25)
Dnepropetrovsk Metallurgical Plant imeni Petrovskiy	Completed its February plan for producing section iron for Tsimlyansk GES by 11 February (19)
Taganrog Metallurgical Plant imeni Andreyev	Shipped a consignment of pipe to the construction projects a month ahead of schedule (19)
Alapayevsk Metallurgical Plant	Shipped a large order of roofing tin to Volga-Don construction project (26)
Dnepropetrovsk Metallurgical Plant imeni Komintern	Shipped thin sheet steel and section iron to "Volga-Donstroy" (18)
Dnepropetrovsk Metallurgical Plant imeni Lenin	Shipped large order of pipe to "Volga-Donstroy" (18)
Lipetsk "Svobodnyy Sokol" Metallurgical Plant	Shipped first group of pipe to the Kuybyshev GES (27)
Odessa Cable Plant	Shipped tens of tons of cable to Kuybyshev and Stalingrad GES (28)
Novo-Kramatorsk Plant imeni Stalin	Completed construction of fourth set of machines for operating lock gates of Volga-Don Canal; each set weighs 48 tons and is automatic; will make turbine blades for main turbines of Tsimlyansk GES.(29) Produced three 150-ton stators for Tsimlyansk GES.(30) Making turbine bushings weighing 110 tons each, and 115-ton bearings.(31) Produced several 15-cu-m excavators for construction projects (32)
Dnepropetrovsk Plant imeni Molotov	Shipped structures for reinforcing concrete to Tsimlyansk GES and filled many orders for Kuybyshev and Stalingrad GES; at present making lock gates for Volga-Don Canal (26)
Sverdlovsk Uralmash Plant imeni Ordzhonikidze	Making 14-cu-m walking-dragline excavators for construction projects (2)
Voronezh Komintern Excavator Plant	Shipped first order of E-1003-type excavators to Kuybyshev and Stalingrad GES; more than 20 of these machines are in operation along Volga-Don Canal (27)
Krasnoyarsk Heavy Machine-Building Plant	Shipped several large locomotives to construction projects; presently making large traveling cranes for Volga-Don Canal project (33)

- 4 -

S-E-C-R-E-T**SECRET**

SECRETS-E-C-R-E-T

50X1-HUM

<u>Enterprise</u>	<u>Remarks</u>
Bataysk and Sal'sk Railroad Workers	Will repair locomotives working on Volga-Don Canal project; first two locomotives repaired, shipped to construction project (25)
Polol'ek Machine-Building Plant imeni Ordzhonikidze	Producing boilers for Tsimlyansk GES (34)
Moscow Plant imeni Ordzhonikidze	Shipped 3 of an order of 7 boilers to Volgodonstroy during first quarter 1951 (34)
Tula Boiler and Ventilation Plant	Shipped several large boilers to Kuybyshev GES ahead of schedule (35)
Zaporozh'ye Machine-Building Plant imeni Voykov	Started production of GM-300 hydraulic excavator for Volga-Don Canal project (36)
Gor'kiy "Krasnoye Sormovo" Plant imeni A. A. Zhdanov	Making parts, and will assemble excavation pumps for Main Turkmen Canal (25)
Rostov "Krasnyy Don" Plant	Shipped 9 excavation pumps and a booster pump to Volga-Don Canal (37)
Novosibirsk "Burovaya Tekhnika" Plant	Shipped winches and pumps to Kuybyshev GES in 1950; now making winches, pumps, and other machines for Kuybyshev and Stalingrad GES and Volga-Don Canal (28)
Laptevo "Uglemash" Plant.	Produced first order of centrifugal pumps for Stalingrad GES (35)
Tiraspol' Machine Plant imeni Kirov	Producing new order of 10 inner combustion motors and five 8-in centrifugal pumps for Main Turkmen Canal (38)
Miass Ural Automobile Plant imeni Stalin	Shipped a convoy of 3-ton UralZIS trucks to Volga-Don Canal in January (39)
Moscow Automobile Plant imeni Stalin	Shipped 65 ZIS-150 trucks to Volga-Don Canal, to Kuybyshev GES, and 25 to Stalingrad GES in 1951 (34)
Chelyabinsk Tractor Plant	Shipped 40 powerful tractors to Kuybyshev and Stalingrad GES and Volga-Don Canal. (39) In 1950, it shipped 148 S-80 tractors to "Volgodonstroy" (40)
Kharkov Tractor Plant imeni Ordzhonikidze	Producing tractors for the construction projects (41)
Chelyabinsk Road-Machinery Plant imeni Kolyushchenko	Shipped large bulldozers and scrapers to Main Turkmen Canal and "Kuybyshev-gidrostroy" (39)

- 5 -

S-E-C-R-E-T**SECRET**

SECRETS-E-C-R-E-T

50X1-HUM

<u>Enterprise</u>	<u>Remarks</u>
Shcherbakov Road-Machinery Plant	Shipped new type machinery to all construction projects (42)
Nikolayev Road-Machinery Plant	Shipped nearly 300 road machines to Kuybyshev and Kakhovka GES and "Volgodonstroy"; at present, making 120 bulldozers and scrapers for "Volgodonstroy" (43)
Chelyabinsk Machine Plant imeni Kalinin	Assembled three 15-ton cranes with 5-ton winches for Volga-Don Canal; shipped high productive rock crushers to Main Turkmen Canal and Kuybyshev GES (19)
Nyazepetrovsk Machine-Building Plant imeni Kalinin	Produced rock-crushing machines and derrick cranes for Main Turkmen Canal and Kuybyshev GES (39)
Dnepropetrovsk Construction-Machinery Plant	Shipped more than 30 conveyers to Tsimlyansk GES (31)
Moscow "Krasnyy Metallist" Plant	Producing electric telfers for Kuybyshev GES and Volga-Don Canal; ten have been sent to "Volgodonstroy" in 1951 (34)
Khar'kov Machine-Building Plant imeni Lenin	Making telfers for Volga-Don Canal (44)
Yasinozataya Machine-Building Plant	Shipped tower cranes to Stalingrad GES (45)
Bel'tsy Machine Plant	Produced 15 general purpose and ten circular cutting woodworking machines, and 50 vices for Main Turkmen Canal ahead of schedule (38)
Podgorenskiy Cement Plant	Shipped thousands of tons of high-quality cement to Volga GES (27)
Tallin "Punane Kunda" Plant	Producing cement for construction projects (46)
Odesa Roof-Sheeting Material Plant	Shipped an order for roof-sheeting material to Kakhovka GES (28)
Lisichansk Glass Plant	Produced 10 carloads of window glass for Stalingrad GES and Volga-Don Canal (47)
Rechitsa House-Construction Combine	Shipped lumber to Kuybyshev GES (48)
Slonim Lumber Mill No 16	Shipped 40 carloads of lumber to Tsimlyansk GES (49)
Bobruysk Division of Glavsnables	Shipped 46 carloads of lumber to Volga-Don Canal (50)

- 6 -

S-E-C-R-E-T**SECRET**

SECRETS-E-C-R-E-T

50X1-HUM

<u>Enterprise</u>	<u>Remarks</u>
Mozyr' Woodworking Combine	Shipped 14 carloads of lumber to Volgodonstroy in February (51)
Timber Managements of "Molotovles" Combine	Pledged to ship more than 236,000 cu m of lumber for Volga GES (52)
Lumber Mills of Middle: Urals	Shipped 106 carloads of construction lumber to Tsimlyansk GES and 75 carloads to Stalingrad GES during January (26)
Vinnitsa and Tul'chin Timber Managements of "Zhitomirles"	Shipped 5 carloads of round timbers to Kakhovka GES (16)
Lumber Mills of Archangel'sk	Shipped 16 trainloads of sawn lumber to Volga GES (36)
Lumber Mills of Buryat-Mongolia	Shipped more than 1,000 carloads of lumber to Main Turkmen Canal project (53)

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- 7 -

S-E-C-R-E-T**SECRET**

SECRET
S-E-C-R-E-T

50X1-HUM

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- 8 -

S-E-C-R-E-T

SECRET