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PUMP BUILDERS LACK SCIENTIFIC ASSISTANCE:
NEW CONSTRUCTION MACHINERY DESIGNED, TESTED

MACHINE PARTS HAVE POOR RESISTANCE TO WEAR -- Moscow, Vechernyaya Moskva, 3 Mar 51

The Moscow Rostokinskiy Plant has established a special section for the assembly of concrete pumps. These are new, heavy-duty machines, which can move 25 cubic meters of concrete per hour a distance of 300 meters horizontally, and 40 meters vertically.

Since last year the plant has put out 22 concrete pumps. The first models were used with success in work on high buildings in Moscow. Now they are at work on the construction site of the Volga-Don canal, where engineers are giving good reports on them, stating that one pump replaces the work of 100 men.

The All-Union Scientific Research Institute for Construction- and Road-Machine Building designed the new machine, but unfortunately, when it was transferred from the drawing boards to the assembly line the institute lost interest in it, and failed to follow it through the production stage.

It is now apparent that certain of the machine's parts are not sufficiently resistant to wear. The cylinder sleeves, for example, had to be replaced after the pumps had moved only several hundred cubic meters of concrete. Specialists of the plant managed to develop a sleeve of specially heat-treated iron, which proved to be ten times as durable as sleeves of the first type; but even this improvement fell short of requirements, and construction workers are calling for a sleeve of still higher durability. To answer this demand is not easy for a small plant which has neither a laboratory, nor the outside assistance of trained scientists.

The plant gets parts for the pumps from several enterprises. Formerly, parts came more or less regularly from the Kostroma Rabochiy Metallist Plant. Now they come from the Kovrov Excavator Plant.

- 1 -

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SECRETS-E-C-R-E-T

50X1-HUM

Unfortunately, flaws are all too frequently found in the parts received from the Kovrov Plant. They also have excessive allowances, which means that there is more machining to be done on them. Furthermore, the Kovrov Plant consistently holds up deliveries of its castings.

The Main Administration of Construction Machinery and the Ministry of Construction- and Road-Machine Building should take steps to help the Rostokinskiy Plant out of its dilemma. Specifically, they should see to it that the Kovrov Plant improves the quality of its castings and delivers them on time.

The Rostokinskiy Plant is able to supply the Volga-Don construction project with only one fourth the large number of concrete pumps which it has asked for. The capacity of this plant is not great, yet it is assembling a great number of other aggregates for the new construction projects.

What will be the outcome of this situation?

The construction workers have proposed that concrete pumps of double the capacity of existing models be made, so that fewer machines would be needed on the scene of operations. The plant received this suggestion with enthusiasm, and has begun work on two designs for such machines. One of these machines will be a twin-body model mounted on a single frame; the other will have units and parts of the same dimensions as the present pump, but the speed of the working cycle will be doubled.

There are, however, a great many technical and scientific problems to be solved before such machines can be produced. For example, the plant designers are having difficulty in determining the load under which the elements of the machines will have to operate. If they are to increase the productivity of pumps from 20-25 cubic meters per hour to 40 cubic meters per hour, they will need outside help from scientists. They will also need help in developing better methods of inspecting welded seams and steel and iron parts, as well as in the above-mentioned development of more durable cylinder sleeves.

It is assumed that the Advisory Bureau, and the Committee for Assisting the Great Construction Projects, both of which belong to the All-Union Scientific Engineering-Technical Society for Machine Building, will soon render the Rostokinskiy Plant the aid it needs.

BUILD CRANES FOR LOCOMOTIVE REPAIR -- Moscow, Vechernyaya Moskva, 10 Jan 51

The Moscow Mashinostroitel' Plant fulfilled the 1950 plan ahead of time and earned the Stakhanovite rating for 5 of its shops, 15 sections, 2 divisions, and 39 brigades.

The plant is now series-producing special cranes, designed for use in repairing steam locomotives. Two of these cranes were recently sent to Khar'kov. Truck cranes of 3-ton lifting capacity produced at the plant are now at work at railroad stations, sidings, warehouses, and bases all over the country:

The plant brigade which tests the new excavators is fulfilling its job 300 percent.

PORTAL CRANES HANDLE STRUCTURAL STEEL -- Moscow, Mekhanizatsiya Stroitel'stva, Mar 51

The Promstal'montazh [Industrial Steel-Structure Assembly] Office has designed three types of portal cranes for handling structural steel at storage yards. At present, 20 of these cranes are being utilized by the Main Administration for Production and Assembly of Steel Structures of the Ministry of Construction of Heavy-Industry Enterprises.

- 2 -

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

50X1-HUM

S-E-C-R-E-T

The cranes, designated the PK-15, PK-20, and PK-50, are similar in basic design, and are equipped with series-produced electric winches of ordinary type such as the EL-5 and the EL-3.

It has been found that the use of these gantry cranes instead of railroad cranes is saving about 25 rubles per ton of structural steel.

<u>Specifications</u>	<u>PK-15</u>	<u>PK-20</u>	<u>PK-50</u>
Weight (tons)	29.5	28	53.7
Lifting capacity (tons)	15	20	50
Span (m)	24	20	20
Height of hoist (m)	10.7	10.7	10.5
Average speed of hoist (m/min)	6	6	6
Trolley speed (m/min)	8.25	8.25	8.25
Traveling speed of crane (m/min)	25	25	19.5

MIXER CAN BE PUT UP, TAKEN DOWN -- Moscow, Mekhanizatsiya Stroitel'stva, Mar 51

In the beginning of 1950, the Kremenchug Road-Machine Plant imeni Stalin put out the new D-225 asphalt-concrete mixer. It has a productivity of 8-10 tons per hour and weighs 16,000 kilograms. Built according to specifications of the All-Union Scientific Research Institute for Construction- and Road-Machine Building, the D-225 is suitable for use in rayon and oblast road building and maintenance. Testing showed it to be entirely satisfactory.

The D-225 is mounted on a steel structure which can be readily assembled and taken down. Sand and gravel are fed up to the dryer, then screened and mixed in measured portions with bitumen. Trucks can be driven underneath the supporting structure to carry off the finished product.

Another, larger asphalt-concrete mixer, the D-152 is now series produced by the Ministry of Construction- and Road-Machine Building. It has a productivity of 25-30 tons per hour.

BUILD ELEVATORS FOR NEW UNIVERSITY -- Moscow, Vechernyaya Moskva, 20 Dec 50

The Moscow Pod'yemnik Plant has completed four-high-speed passenger elevators for the Moscow State University. Nine more of these elevators are being assembled in the plant.

ELEVATOR CAR ON DISPLAY -- Moscow, Moskovskaya Pravda, 31 Jan 51

The Ministry of Heavy-Machine Building is exhibiting the car of a high-speed elevator, built by one of the ministry's plants for a Moscow building.

The car, which carries over 20 passengers, is built of heavy steel plate. The mere push of a button will open the door. Plants of the ministry will produce 140 of these elevators in 1951. They will go to the new building going up on Smolenskaya Ploshchad, to the building on Kotel'nicheskaya Naberezhnaya, and to a new building for the Moscow State University.

- 3 -

S-E-C-R-E-T

S-E-C-R-E-T

50X1-HUM

Three types of elevators have been built so far: one, for service to the first few floors has a speed of 1.5 meters per second; the second type has a speed of 2.5 meters per second; the third travels at 3.5 meters per second. Freight elevators, and small service elevators of 250-kilogram capacity will also be supplied for the buildings.

Engineers of the electrical industry have designed a number of electrical units for the elevators.

WILL TAKE ON NEW PRODUCTION -- Moscow, Moskovskiy Komsomolets, 25 Feb 51

The Krasnogorsk Pavshinskiy Machinery Plant has established production of a number of complex machines for the construction industry.

During 1950, the plant put out over 50 machines for the manufacture of cement, brick, glass, and other materials. Of special importance are the centrifugal pipe-casting machine and the electric spreader which the plant is now producing.

This year, the plant will begin production of an unloading and piling machine designed for use at plants producing dry plaster, and of molds for making fancy glass articles.

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- 4 -

S-E-C-R-E-T