

SECRET

CLASSIFICATION
 CENTRAL INTELLIGENCE AGENCY
 INFORMATION FROM
 FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT
 CD NO.

50X1-HUM

COUNTRY USSR
 SUBJECT Economic; Technological - Earth digging machinery
 HOW PUBLISHED Monthly periodical; daily newspaper
 WHERE PUBLISHED USSR
 DATE PUBLISHED 14 Sep - Nov 1950
 LANGUAGE Russian

DATE OF INFORMATION 1950
 DATE DIST. 17 Jan 1951
 NO. OF PAGES 4
 SUPPLEMENT TO REPORT NO.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF ESPIONAGE ACTS U. S. C., 51 AND 52, AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION

SOURCE Periodical and newspaper as indicated.

TEST NEW DITCHING MACHINES:
INEFFICIENCY SLOWS EXCAVATOR PRODUCTION

NEW EXCAVATOR HAS ADJUSTABLE TREAD -- Moscow, Mekhanizatsiya Stroitel'stva, Oct 50

The Krasnyy Ekskavator Plant has put out a new multiple-bucket transverse excavator, the EM-502. The Leningrad Affiliate of the All-Union Scientific Research Institute for Construction- and Road-Machine Building helped with the machine's design, the outstanding feature of which is its mounting on crawlers of adjustable span. The body rides directly on the main crawler, while a secondary, lighter crawler is attached to the end of a telescoping tube, like an outrigger. Thus, in digging an irrigation canal or ditch, for which the machine was primarily designed, the two crawlers can ride along opposite sides of the trench, adjusted to its width, while the bucket arm is lowered between them to dig along the wall. It is also possible to have both crawlers on the same side of the ditch, the secondary one serving as a counterweight to the bucket arm. A conveyer arm extends to the side opposite the bucket arm, taking away the earth, and depositing it on the bank.

The EM-502 weighs 18,930 kilograms. It is powered by a 52-horsepower STZ-NATI motor and has four forward speeds, from 62 to 411 meters per hour. The crawlers may be adjusted to spans 1,700-7,000 millimeters broad. Actual productivity, in digging new canals, amounted to 25.6-38.2 cubic meters per hour; for work in existing canals, it amounted to 56.0-68.0 cubic meters per hour.

On the basis of tests, the machine has been recommended for series production.

AUGER TO HELP PIPE-LAYING -- Moscow, Mekhanizatsiya Stroitel'stva, Oct 50

The Zaporozhstroy Trust has developed a new horizontal earth auger, the GBM-2, designed for cutting under main pipe lines, streetcar or railroad tracks, and other obstructions, so that pipes can be put through.

- 1 -

CLASSIFICATION SECRET

SECRET

| | | | | | | | | | | |
|-------|--|--|--------------|--|--|--|--|--|--|--|
| STATE | <input checked="" type="checkbox"/> NAVY | <input checked="" type="checkbox"/> NSRB | DISTRIBUTION | | | | | | | |
| ARMY | <input checked="" type="checkbox"/> AIR | <input checked="" type="checkbox"/> FBI | | | | | | | | |

SECRET

SECRET

50X1-HUM

The auger is mounted on rails, and is fed by hand against the face of the earth as it bores the hole.

Specifications follow:

| | |
|--------------------------------------|-------------------|
| Weight (kg) | 1,200 |
| Dimensions (mm) | 3,200 x 610 x 225 |
| Power of electric motor (kw) | 13.6 |
| Maximum diameter of holes bored (mm) | 700 |

CANAL DIGGERS TO BE SERIES PRODUCED -- Moscow, Mekhanizatsiya Stroitel'stva,
Oct 50

During May and June 1950 there was an interdepartmental test of the KM-800 and the KM-1,000-A towed plow-type canal diggers, designed by the Institute for Mechanization of Agriculture, Academy of Sciences Belorussian SSR, and built at the Road Machinery Plant imeni Stalin.

The KM-800 is for digging small canals in marshy ground and ground containing minerals, free of tree roots and rocks. The KM-1,000-A is designed for digging canals in peat fields. Both machines dig a finished canal in one pass. Their basic units are similar, differing only in the size of the digging elements and the number of wheels: two for the KM-1,000-A, three for the KM-800. Both machines are designed to be towed by a pair of S-80 tractors.

Specifications follow:

| | <u>KM-800</u> | <u>KM-1,000-A</u> |
|---------------------------------|---------------|-------------------|
| Weight (kg) | 3,350 | 2,650 |
| Length (mm) | 5,760 | 4,850 |
| Width, wheels normal (mm) | 2,220 | 2,220 |
| Width, wheels extended (mm) | 2,640 | 2,640 |
| Height, transport position (mm) | 2,675 | 2,650 |
| Depth of canal dug (mm) | 800 | 1,000 |
| Width of canal at bottom (mm) | 200 | 200 |

On the basis of tests, the machines were recommended for series production by the Section on Mechanization, Potato- and Vegetable-Growing Section, Technical Council for Mechanization and Electrification of Agriculture, Ministry of Agriculture.

NEW EXCAVATOR TRIED OUT IN CANAL -- Moscow, Mekhanizatsiya Stroitel'stva,
Nov 50

The Kiev Krasnyy Ekskavator Plant has built and tested a new multiple-bucket transverse excavator, the EM-301. Technical plans for the machine came from the Leningrad Affiliate of the All-Union Scientific Research Institute of Construction- and Road-Machine Building.

The machine moves along on rails, two long booms projecting out to either side. One of the booms is equipped with an endless chain of buckets. It can be raised or lowered, to suit the angle of the terrain, and digs away transverse strips as the machine moves forward. The earth is deposited onto a conveyer belt, which runs out along the opposite boom, to be deposited onto a pile or into a truck.

- 2 -

SECRET

SECRET

SECRET
SECRET

50X1-HUM

The bucket boom is 9 meters long, the conveyer arm 10-12 meters long. All operations are powered by electric motors. A drum mounted at the rear winds and unwinds the power cable.

Specifications of the EM-301 are as follows:

| | |
|--|--|
| Weight (tons) | 22.5 |
| Wheel base (mm) | 3,350 |
| Height, from bottom to top of vertical support for raising booms (m) | 7.5 |
| Width (m) | 5.0 |
| Electric motor operating buckets and conveyer belt | MA-145-2/6, of 34 kw power at 975 rpm; 380/220 v |
| Electric motor for locomotion | MA-142-1/6, 3.8 kw power at 960 rpm; 380/220 v. |
| Electric motor for raising bucket arm and for raising conveyer arm | Same type |
| Electric motor for closing hoppers | TNG-42, 0.62 kw power at 1,400 rpm; 380/220 v. |

The excavator was tried out on the construction of a canal 8 meters deep. Working on the bottom with the bucket arm raised up along the gradient of the canal side, the productivity was 350-400 cubic meters during an 8-hour shift. When running along the top, with arm lowered to dig the canal, productivity during an 8-hour shift was 345-390 cubic meters. It has been recommended for series production.

POOR MANAGEMENT COSTS PLANT TIME, MATERIAL -- Tbilisi, Zarya Vostoka, 14 Sep 50

In the machine section of the assembly shop at the Tashkent Excavator Plant everything runs behind schedule during the first 10 days of each month. Billets and semifinished parts are supplied late, many workers are idle. Tools are not available to machinists; drillers and planers, having nothing else to do, carry out chips. Things are even worse during these 10 days in the assembly section, where workers have nothing to assemble.

Work is planned no better in the primary production shops -- the foundry, the forge shop, and the machine shop. A first glance at the plans of the foundry and forge shop gives the impression that everything is in order; even production rates and group output systems are indicated on the chart. There is a period of several days, however, during which the chart is run through with red marks denoting nonfulfillment.

Rejects in the foundry amount to 15-20 percent; for some types of gears the figure reaches 50-60 percent. Molding and pouring are done by hand, even though the shop has been equipped with the latest molding machines. Because of the inefficiency and dilatoriness of the directors, the machines are not being properly exploited, while the chief metallurgist and the plant directors fail to reprimand the shop directors in spite of the several hundred thousand rubles the foundry has lost from rejects during the last month.

The machine shop gets only enough parts from the foundry, without a single extra billet, so that a shortage is created when flaws are discovered while the parts are being machined. Finally, there is a stoppage in the assembly shop.

- 3 -

SECRET

SECRET

SECRET
SECRET

50X1-HUM

Because proper accounting is not maintained, many parts are lost in transit from the forge shop to the machine shop. Many billets lie in disorder about the machine shop, with workers taking them as they need them. Listing and accounting of rejects is confined chiefly to heavy parts, while the smaller rejects disappear without a trace, along with the labor of the forger, and the metal. The situation has prompted the director of supply, Bodrikov, to remark that the metal vanishes, and that there is nothing to show for it.

Once, the forge shop stopped work on some already-heated bolts, to meet a deadline on three levers. For the manufacture of several dozen bolts or nuts, it has often been necessary to call out the day-shift workers at night, to start up the furnace and heat 3-5 kilograms of metal. Several times more resources are expended than provided for in the plan.

The progress of the plant during August, for which it pledged production of two above-plan excavators, is typical. Only one third of the plan was fulfilled at the end of 20 days, when the shop suddenly was thrown into violent activity, with only 10 days left to meet the plan. It was found that there were no cotter pins, so the director of the planning section, Lundin, ordered that some be made of wire. An entire day was spent in finding suitable wire. Then the cry arose that there were no bolts, that there were no gears, that a bushing was faulty.

The director of the planning section then ordered that the spare parts boxes be opened. Imagine an excavator without spare parts!

The work became tense, and the resources of all the other shops were drawn upon. Repair of equipment was halted in the machine repair and electrical shops; welders and mechanics were taken out of the forge shop and foundry.

At the end of the month the pledge was met. But the excavators, lacking spare parts, cannot be sent to the consignees.

One Stakhanovite worker declares that the assembly section could assemble twice as many machines if it could only get its parts on time. It behooves the plant director, Binkenshtat, to share this opinion, and to take measures to improve planning, eliminate rejects, and put new equipment into operation more promptly.

- E N D -

- 4 -

SECRET

SECRET