

CENTRAL INTELLIGENCE AGENCY  
INFORMATION FROM  
FOREIGN DOCUMENTS OR RADIO BROADCASTS

--

DATE OF INFORMATION 1953

SUPPLEMENT TO  
REPORT NO.

THIS IS UNEVALUATED INFORMATION

NEW SOVIET PRECISION EQUIPMENT FOR AGRICULTURAL,  
FOOD, INDUSTRIAL, MEDICAL, AND EDUCATIONAL PURPOSES

The Kiev Scales Plant imeni Dzerzhinskiy has delivered and installed 200 automatic-feed scales (dozator) at procurement points and elevators. Grain is weighed on these scales automatically at a rate of 20 and 60 tons an hour. The elevator scales weigh grain in quantities of 5 and 10 tons.

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The plant has perfected new mechanisms for agricultural purposes. It has set up series production of automatic scales for weighing sugar beets. Other enterprises such as vegetable, starch, and alcoholic-spirit enterprises are receiving a large number of these scales for weighing potatoes.

Leningradskaya Pravda, 26 Nov 53

The Kiev Scales Plant imeni Dzerzhinskiy has turned out an experimental lot of automatic scales to be used for weighing tin, lead, copper powders, soot, graphite, pulverized coke, and resin. The new aggregates are equipped with a special vibrating feeder, which assures an even and continuous feeding of materials from a hopper onto the scale. An electropneumatic control system makes it possible to weigh out a definite quantity of specified portions. On completion of this operation, the aggregate stops automatically.

The plant has also manufactured scales for weighing and packing toxic chemicals for use in agriculture. Production of new automatic scales for the fish industry has been started.

Devices are being produced for mechanically filling and packing sacks with flour. The productivity of such an apparatus is up to 1,000 sacks a shift. These mechanisms have shown efficient operating qualities at the Dnepropetrovsk Milling Combine.

FULFILL PLAN FOR PRODUCTION OF SCALES -- Moscow, Vechernyaya Moskva, 30 Nov 53

The Moscow Scales Plant completed its 1953 plan on 30 November. The plant produced 2,000 merchandise scales above plan. A large part of the scales, with a capacity of 150 kilograms, was shipped to kolkhozes and MTS. In addition, the plant manufactured 1,200 counter scales for agricultural needs.

COMMERCIAL EQUIPMENT FOR TRADE NETWORK -- Leningradskaya Pravda, 24 Oct 53

The Yoshkar-Ola Commercial Equipment Plant (Pyatnitskiy, director) sends its products to Moscow, Leningrad, Kiev, Minsk, the Baltic area, Central Asia, and to the Port of Korsakov on Sakhalin Island.

In the last few years, the plant has furnished the trade network with more than 160,000 half-ton and one-ton scales, small weights, refrigerator cabinets with compressor units, low-temperature showcases (prilavki), and 8-cubic-meter collapsible refrigerator chambers. In 1953, the plant mastered the production of trailers for use as mobile stores, bodies for the GAZ-51 chassis for carrying manufactured goods, and carts for hauling. The plant recently sent refrigerator showcases to Moscow for preserving sour-milk products.

CRITICIZE PLANT FOR UNNECESSARY EXPENDITURES -- Moscow, Finansy i Kredit SSR, Aug 53

Large, nonproductive expenditures in the form of penalties, fines, and forfeitures are brought about by failure to meet products-supply agreements, by breach of transportation agreements, by tardy payment of accounts due, etc. For example, in 1952, the [Armavir] Armalit Plant paid penalties, fines, and forfeitures in the amount of 719,000 rubles, which was 20 percent of the total plant expenditure.

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BEGIN SERIES PRODUCTION OF SACCHARIMETER -- Moscow, Sakharnaya Promyshlennost', Nov 53

The Kiev Checking and Measuring Instruments Plant has begun series production of the SU-1 universal single-compensation saccharimeter.

The scale of the instrument covers a range from -40 to +100 [sugar degrees]. A new system of polarization optics has been used in the instrument. [A diagram of the optical system is shown in the source.]

The saccharimeter will find broad use not only in the sugar, but also in other branches of the food products industry as well.

The saccharimeter was designed and produced by B. M. Medinets, chief of the Optical Measuring Division; A. A. Zayka, plant engineer; and Livshits, plant foreman.

DEVELOP AND BUILD NEW SACCHARIMETER -- Moscow, Sakharnaya Promyshlennost', Nov 53

In 1950, TsINS (Central Scientific Research Institute of the Sugar Industry) was assigned the task of developing a saccharimeter suitable for use at sugar refineries. An experimental model of an automatic saccharimeter has been built, and it has successfully undergone laboratory testing.

This experimental model is of simple design and has no control levers other than a zero adjuster.

Results after testing the saccharimeter show that it is suitable for use in production. Automatic saccharimeters will soon be put in series production. A device which will record readings is being manufactured. This device, which was developed by the author of this article, will be attached to the saccharimeter as a separate part. -- V. I. Kudryavtsev

DEVELOP NEW ELECTRIC THERMOMETERS AND MEASURING INSTRUMENT -- Moscow, Vechernyaya Moskva, 2 Nov 53

The Central Scientific Research Laboratory of Testing and Measuring Instruments of the Ministry of Food Products Industry USSR has developed two new electric thermometers.

The sensitive element of the new thermometers is a stem made of cupric oxide and insulated by caps. These thermometers can check the temperature in all stages of production. In addition, they can determine when bread has been sufficiently baked and sausage, ham, and other products have been sufficiently boiled.

V. Ponomarev and Ye. Tulyakov, both senior associates, and E. Labkovskaya, engineer, participated in the development of the thermometers.

A few days ago, the laboratory turned over to production [organizations] the technical data for the series production of the electric thermometers.

Moscow, Vechernyaya Moskva, 11 Nov 53

The Central Scientific Research Laboratory of Testing and Measuring Instruments of the Ministry of Food Products Industry USSR has developed and finished testing an instrument which can be used in the canning industry for measuring the thickness of tin plating. It can also be used at galvanizing shops for determining the thickness of electrolytic plating.

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V. D'yachenko, senior associate, and N. Azbukina, engineer-designer, participated in the development of the instrument.

METAL-TESTING MACHINE -- Moscow, Komsomol'skaya Pravda, 9 Oct 53

The Odessa Scales Plant imeni Starostin has built a universal machine for Moscow State University for testing tension, compression, and bending of metal. With this machine, the life of a part or a unit can be determined in a few hours.

PROGRESS AT MANOMETER PLANT -- Moscow, Vechernyaya Moskva, 3 Jul 53

The Moscow Manometer Plant completed the 1953 half-year plan in all indexes on 13 June. By 1 July, it had produced 100,000 rubles' worth of products above the plan.

In 1952, the plant mastered the production of new precision instruments, diaphragm differential manometers.

Because of socialist competition, production has increased, and quality has improved. The cost of production has been lowered regularly; as a result of this, 200,000 rubles have been saved above the plan. In 6 months, labor productivity has increased 4 percent above the plan.

A new technique is being introduced in the shops. Many automatic machine tools have been modernized. As a result, the machining of parts is twice as accurate as before. Tests have recently been completed on sizing dies. Their use will raise labor productivity, improve the quality of parts, and simplify the process of assembling instruments.

A great deal of work has been done on the unification of one group of manometers. Instead of six types of manometers, the plant will make only two. Because of this change, the products list will be shortened and the machining process will be simplified.

In the second half of 1953, the shops will be reorganized. Two machine and one assembly shop will be arranged to incorporate the constant-flow principle. -- V. Manin, director, Moscow Manometer Plant

INSTRUMENT PLANT IMPROVES PRODUCTION METHODS -- Moscow, Vechernyaya Moskva, 1 Jul 53

On 1 July, the Moscow Fizpribor Plant will begin the assembly of physics instruments in a renovated assembly shop. Formerly, the sections of the shop were scattered, and parts traveled from floor to floor in the process of being assembled. The shop is now in one room.

Parts for autotransformer cores were formerly stamped from sheet steel. One hundred and fifty parts were required for each transformer. One engineer suggested winding the cores from a steel ribbon. By applying this method, the plant will be able to save in one year 150 tons of expensive transformer steel, 5 tons of bakelite lacquer, and 1.5 tons of acetone. The saving will amount to more than 600,000 rubles.

The plant fulfilled its program for the first 6 months of 1953 on 25 June.

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DEVELOP OPHTHALMIC METAL DETECTOR -- Minsk, Sovetskaya Belorussiya, 17 Nov 53

The Leningrad Krasnogvardeyets Plant, in conjunction with the Leningrad Ophthalmological Institute, has developed a portable metal detector (metallofon), which can be used for locating and determining the physical properties of minute particles imbedded in the eye.

ROENTGENOKYMOGRAPH FOR RESEARCH ON HEART ACTIVITY -- Kiev, Pravda Ukrainy, 9 Sep 53

The Kiev Rentok Plant of the Ministry of Health USSR has developed a universal roentgenokymograph for accurately recording on film the activity of the heart. Tests of the apparatus have shown good results.

The apparatus is mounted on a turn-table and on a suspended unit so that it can be operated at various heights and angles.

More than a thousand improvements have been made in the roentgenokymograph. The electrical system of the kymograph was improved and the valve and piston parts of the cylinder were redesigned.

By the end of 1953, the plant will deliver 30 roentgenokymographs to medical establishments.

FIVE-CHANNEL CARDIOGRAPH -- Moscow, Nauka i Zhizn, Aug 53

Engineers at the experimental plant of the Academy of Medical Sciences USSR have built a five-channel electrocardiograph. The apparatus registers simultaneously heart movements, blood pressure, pulse, respiration, and mechanical and electrical manifestations arising from the contraction of muscles.

The electrocardiograph receives its power from an alternating-current source having a voltage of 127 and 220 volts.

The first apparatus has been turned over to the Moscow State University for testing.

AUTOMATIC MACHINE FOR MEDICAL INDUSTRY -- Petrozavodsk, Leninskoye Znamiya, 19 Aug 53

Tests of an automatic machine for the medical industry have been completed at the Zhdanov Medical Equipment Plant. The machine will be used for packing medicines and corking bottles. All operations, from measuring the liquid to the packing of bottles in boxes, are done automatically. The machine replaces from 15 to 20 workers.

NEW PROJECTOR FOR SCHOOLS -- Tbilisi, Zarya Vostoka, 15 Oct 53

The Zagorsk Instrument Building Plant No 6 in Moskovskaya Oblast produces more than 40 different types of educational aids. The enterprise is now making new MGU-53 projectors for Moscow State University imeni M. V. Lomonosov. The new projector, which is intended for showing slides and film strips of different sizes, as well as microscope slides, is equipped with two objectives which magnify the image 30-110 times.

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NEW SOVIET TABULATOR -- Moscow, Pravda, 17 Nov 53

Computing-analyzing machines are intended for greater mechanization of accounting in industry, transportation, and trade. They are also used in scientific and research institutes to mechanize labor-consuming calculations.

The T-5, an electromechanical, 80-column automatic, does addition and subtraction and prints intermediate, sub, and grand totals. The machine has about 110,000 parts of more than 2,000 type designations. The length of the wiring in this tabulator is about 5 kilometers.

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