

OCM

7

INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

This material contains information affecting the National Defense of the United States within the meaning of the Espionage Laws, Title 18, U.S.C. Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

S-E-C-R-E-T

25X1

COUNTRY	USSR (Moscow Oblast)	REPORT	
SUBJECT	Moscow Internal Truing Machine Plant No. 221 <i>(Description, construction, transportation, working conditions, security, production difficulties)</i>	DATE DISTR.	19 December 1958
		NO. PAGES	1
		REFERENCES	
DATE OF INFO.			25X1
PLACE & DATE ACQ.			25X1

SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

Moscow Internal Truing Machine Plant No. 221 (probably the same as the Moscow Internal Grinding Machine Building Plant) 25X1

This report contains a description of the plant, a description of products produced in the plant, sketch of the plant layout, and various information about the organization and working of the plant. 25X1

S-E-C-R-E-T

25X1

F

STATE	X	ARMY	X	NAVY	X	AIR	15	FBI		AEC				
(Note: Washington distribution indicated by "X"; field distribution by "#")														

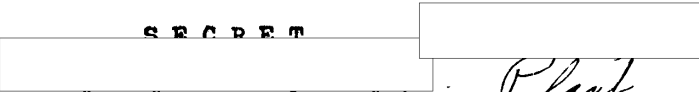
INFORMATION REPORT INFORMATION REPORT

25X1

Page Denied

Next 16 Page(s) In Document Denied

SECRET



COUNTRY: USSR

Internal Grinding Machine Building Plant

25X1

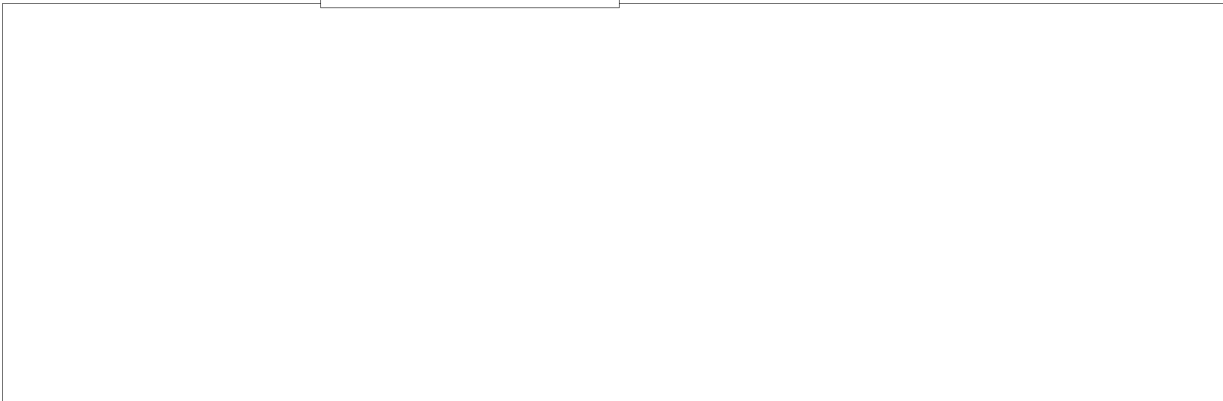
SUBJECT: MOSCOW PLANT No 221 [REDACTED]
INTERNAL TRUING [REDACTED]
MACHINES

DATE OF INFORMATION:



25X1

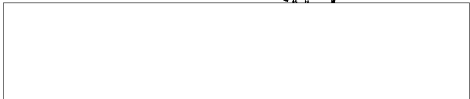
PLACE OF ACQUISITION:



MOSCOW PLANT No 221 [REDACTED] (INTERNAL TRUING [REDACTED])

Moscow Plant No 221 was bordered on the front by Paveletskaya (2) ulitsa, on the right by ^{stavu} Paveletskiy Proyezd (3), in back by the North ^{Do} [REDACTED] (4) railroad line and the Moscow-Tovarnaya freight station, and on the left by a number of houses. Point of reference was the Paveletskaya (2) railroad station, located 400 meters north via the railroad line in back of the installation. Paveletskaya subway station was located 500 meters away. Bus Line No 13 coming from this station passed in front of the Plant and on to the end of the street. The Moskva river was located about 70 meters away. The Plant was subordinate to the Ministry of Machine Construction. It had the shape of an irregular rectangle. Its 2.5 meter high, 1200 meter perimeter wall had a vehicle entrance on Paveletskaya ulitsa and a railroad entrance.

SECRET



25X1

PRODUCTS

25X1



Each month the Plant manufactured 25 screw grinding lathes, 10 reamers equipped with microscopes, and reamers that had coordinates. It also made necessary parts such as: gears, pinions, crowns, etc. Sometimes it made steel, cast iron, and bronze teeth (using a 7° precision angle) which were used in parts for the subway escalators and mine elevators.

Screw grinders were stamped № 582 and reamers were stamped ZWSHS № 2450.

The following is a list of the plant layout, including buildings.

№ 1 - Administration and Offices (Four stories)

First Floor: Accounting offices, cashier, personnel office, Labor Union, and Party.

Remaining Floors: Director, engineers, planners, constructors, and technologists.

№ 2 - Personnel Office

№ 3 - Machine Shop № 5 (One story)

№ 4 - Fit and Precision Mechanics Shop

№ 5 - (Two Story Structure) contained the following shops:

First floor: Machine Shop № 1

Section № 1



It manu-

25X1

factured all types of gears with conical, helicoidal, and straight

teeth; endless crown wheels, axles of screw grinders, reamers with

microscopes. They used the standard Russian norm of a 20° precision

SECRET

angle. Ball bearings were fitted to some truing machines. It also

25X1

SECRET

[Redacted]

25X1

frames, headstocks, and other large parts were manufactured.

[Redacted]

25X1

Most of the machinery in this section was German manufactured:

4 German LORENZ cutters (cut by blows) called ZUBO-DELBEZHNYE-STANKI (5).

2 German ^(BRINWERKE) cutters with blades.

5 300 volt PFANTER cutters with gear hob. It was stepped up to approximately one millimeter when working on ordinary steel.

1 High speed Russian manufactured KONSOMOLETS tooth polishing machine.

2 German MAAG tooth grinders.

1 Internal grinding machine which was manufactured in the Plant and was a copy of the HERBERT-LINDER type.

1 Russian manufactured flat magnetic horizontal grinder in poor condition.

5 Standard milling machines

1 File

[Redacted]

25X1

3 Truing machines

[Redacted]

25X1

1 Modern Czecho-Slovakian manufactured machine, made about the middle of 1956. It was quite large, had various control apparatus, could work automatically, and could do internal, external, and conical jobs.

SECRET

[Redacted]

25X1

SECRET

25X1

The following machinery was [redacted] being tested [redacted]

1 German manufactured horizontal traction machine to make gear keys made by a firm in Hamburg. It was called PROTYAZHNISTANOK (6).

1 Special German milling machine which reduced the size of worm

gears which were later finished by a special grinder.

1 Special German turning machine for finishing worm gears,

[redacted]

25X1

1 Machine that shaped the sides of the teeth.

20 Lathes

5 Turret lathes

Standard lathes

Most of these were Krasniy Proletari D.I.P. lathes No 2 and

3 (7), the rest were German manufactured.

1 Large drill with bits up to 50 millimeters.

2 Emeries

Section No 2 handled heavy parts. It had the following machinery:

2 Vertical lathes; one small, the other medium sized.

1 ^{horizontal} Large lathe

5 ~~Large~~ reamers

5 Large German manufactured milling machines.

3 Large planes

2 Large drills

The grinders were all in good condition except for those that had

old blades. Parts were shipped by train and truck. [redacted]

25X1

[redacted] some were going to China, Rumania, Bulgaria [redacted]

Section

~~BUT~~ Sanitized Copy Approved for Release 2010/06/25 : CIA-RDP80T00246A046100410001-4

Ground floor.- Tool storeroom and layouts

Upper floor.- Shop Chief, plans, economics, chronometer operators, appraiser,
technologists, control, and wardrobe.

Section

~~BUT~~ **BUILDING** N° 4 - Raw material dump and control

Section

~~BUT~~ **BUILDING** N° 5 - Electric tempering

Section

~~BUT~~ **BUILDING** N° 6 - Lavatory

SECRET

25X1

many might be shipped to the Urals where many plants were being constructed.

They worked with 0 microns and 1 centesimal

25X1

up to 4 centesimal tolerances were

25X1

allowed.

Second floor: Machine Shop N° 2 for small parts, Fitting and Assembly

Shop N° 4, and Tool Shop N° 8.

N° 6 - Heating Plant

N° 7 - Compressors

N° 8 - Shop N° 4 (Two stories)

It fitted and assembled machines N° 582.

N° 9 - Mold Shop N° 11 (One story)

N° 10 - Shed for storing wood and other materials

N° 11 - Repair Shop N° 14

N° 12 - (Two stories)

First floor: Shop N° 9 for tempering and oil submerging.

Shop N° 10 for assembling optical apparatus.

Second floor: Optical shop.

N° 13 - Carpenter shop and storerooms (Ground floor)

N° 14 - (Two stories)

Second floor: Library, Dining Room, and Kitchens.

N° 15 - Smelting Shop N° 12

N° 16 - Machine and Assembly Shop N° 3

It mechanically fitted and assembled machines N° 2450.

N° 17 - Warehouse (Two stories)

SECRET

25X1

Nº 18 - Die-stamping Shop Nº 6



25X1

It manufactured kitchen utensils out of scrap metal.

Nº 19 - Secret Section

It manufactured military equipment such as wire cutters etc. This shop was kept secret, was controlled and directed by military personnel, and admittance was forbidden.

Nº 20 - Infirmary

Nº 21 - Transformers

Nº 22 - Place where statue of Stalin stood before it was removed.

Nº 23 - Laboratory (Two stories)

Products were tested and controlled here.

Nº 24 - Garage, Ojranan quarters, and Fire Brigade.

Nº 25 - Warehouse for clothing and safety equipment.

Nº 26 - Small Garage where the Director's automobile was kept.

Nº 27 - Building where "propusks" were checked.

Nº 28 - Living quarters

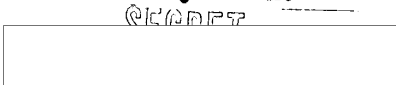
Nº 29 - Space set aside for new constructions

Nº 30 - Nursery

RAW MATERIALS

The plant used coal ([redacted] brought from the mines in DOMBAS in the Ukraine), iron, wood, aluminum, bronze, clay, and mineral oil brought from unknown parts. The majority of these materials arrived by train.

25X1



25X1

WATER SUPPLY

25X1

Water was brought direct from Moscow through underground channels.

POWER

25X1

[redacted] the plant received its power from the M.O.G.U.E.S. (10) of State Moscovite Electric Station. Transformers were located in a small building and the supply was sufficient. Machinery worked on 380 volts and the offices and illumination on 127 and 220 volts. On some occasions, though not often, there was scarcity of power in the shops.

PACKING

25X1

The item was greased, wrapped first light brown parafin paper, then in strong black paper, and put in wooden boxes reinforced with iron bands and nailed or fastened with screw bolts. [redacted] the crates were already reinforced.

They were stamped with the plant name, date of manufacture, model number, and possibly shipping address although the Ministry of Machinery Construction took care of the shipping.

TRANSPORTATION

The railroad siding entered the plant premises through the back between the [redacted] material warehouse and the laboratory. It connected the Northern Dombas railway line located next to the Tovarnaya-Moscow Paveletskaya station. It had no dead end branches. Cars were loaded from the side, loads were standard; [redacted]

25X1

[redacted] Most of the products were transported by rail.

25X1

Plant traffic used the 10-meter-wide limited asphalted [redacted] Paveletskaya ulitsa; it had good drainage, was (always) open to traffic, and was adequate to the plant's needs.

SECRET

25X1

The Plant had two passenger cars, ten trucks; one weighed 15 metric-tons, three

SECRET

weighed 5 metric-tons, and the rest weighed 3.5 metric-tons.

25X1

The garage had a repair shop.

trucks usually transported tools, cotton, oil, and brought in mostly bedframes for lathes and other machinery.

25X1
25X1

The plant did not use water transportation.

STORAGE

The 70 X 25 meter two-story raw material warehouse was located next to the rail-road siding. On the first floor old materials and scrap iron brought in from Germany were stored here. Broken instruments, oil, and lubricants were stored on the second floor.

The 25 X 18-meter warehouse stored clothing and footwear, etc.

Precision instruments were stored in a small warehouse located next to the compressors. Next to the dining room was a small larder for storing foodstuffs and utensils.

The Plant had a fire brigade, sand boxes, extinguishers, and water hydrants.

PRODUCTION LINE

Bedframes and large parts were brought by truck from the Moscow STANCOLIT Plant. Small parts were cast right in the Plant. Shop No 2 made the small parts, Section 1 of Shop 1 the middle sized parts, and Section 2 of Shop 1 made the large parts. Shop No 4 fitted and assembled lathes No 582 on the upper floor parts were fitted by groups, and on the ground floor lathes were assembled and painted.

SECRET

Shops No 5 and 3 made precision parts, machined parts, and besides fitted and assembled Model No 2450. In Shop No 10 optical apparatus was assembled. Shop

25X1

SECRET

25X1

Nº 9 finished the manufacturing process by tempering, galvanizing, and submerging the parts in oil baths. Parts were carried by hand, in carts, or by crane from one section to another. Control apparatus was not automatic.

25X1

25X1

PRODUCTION FIGURES

about eight machines were turned out weekly

25X1

Work went more rapidly at the end of the month than

at the beginning.

WORKING CONDITIONS

The Plant had two eight-hour shifts and a 46-hour work week; overtime had to be worked at the end of the month. Eighty percent of personnel

25X1

worked the first shift.

Employees who had spent more than three years at the plant were given 15-day annual vacations; the rest had 12-day vacations.

normal wage was 800 rubles. Sanitary

25X1

conditions were generally good except for the poor ventilation ^{due} to the old construction.

SECURITY

The outside of the installation was not guarded. At night the inside was guarded by OJRAMA (State Police) and watchdogs. There were about ten OJRAMA, five of whom were women, armed with pistols. Two were stationed at the gate during the day and one at night; they had their own barracks. Personnel had to present their "propusks" (fotograph, signature, and shop number) and punch the time clock at the gate on entering and leaving. Personnel wishing to leave the premises before time had to obtain written permission. They had access to all parts of the plant

25X1

SECRET

25X1

The Plant had a DOSAAF organization which was in charge of the shooting section

SECRET

and taught classes by groups almost every day in the use of small arms. The

25X1

organization frequently held conferences. The fire brigade had its own prac-

tices, each shop had an alarm; sometimes workers assigned this duty also

attended. Medical assistants belonged to the Red Cross.

25X1

membership fee to this organization every four months

Women were obliged to take a week's course outside of the

25X1

plant. A woman, who was a Red Cross member, was in charge of the first-aid

kit in each shop.

ORGANIZATION AND PERSONNEL

The Plant had about 2000 employees.

The plant had studies and drafting departments, a test laboratory, and 17 shops.

25X1

organized as follows:

25X1

Shop Chief

ILLEGIB

Assistant Shop Chief

Chief Supervisor

Supervisors

3 Technologists

1 Tool Supervisor

1 Economist

1 Planner in charge of raw materials

1 Chronometer operator

2 Masters

SECRET

Workers

25X1

SECRET

25X1

[
CHUKANOV (12) Director

ALEXANDRE JOLIN (13) Chief Technologist

MERPERT (14) Construction Engineer.

25X1

Prisoner, convicts, and foreigners [redacted] did not work in the

Plant. However, sometimes there was a foreign student doing his training; in 1952 there was a Korean.

SECRET

25X1

DEFICIENCIES, IMPROVEMENTS, AND PROMOTION OF PRODUCTION

Large shop buildings were under construction so that production could be increased.

There was a scarcity of ^{employees} ~~workers~~ only for one or two months when young workers went to take military training. There were no ~~deficiencies~~ deficiencies in machinery,

shortages of materials; machinery was ^(maintained) well cared for. Work was scarce at the beginning of the month because raw materials did not usually arrive until the

15th. At the end, however, the deficiency had to be made up by working overtime.

25X1

[redacted] ^(procedures) this was peculiar to most of the industries in the USSR and

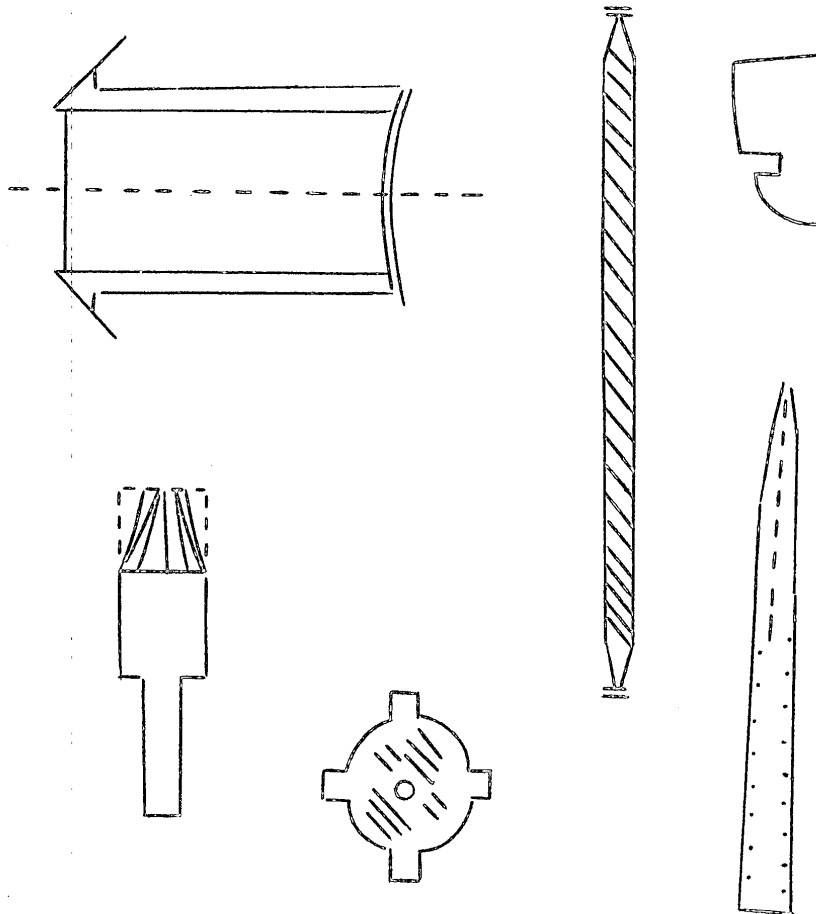
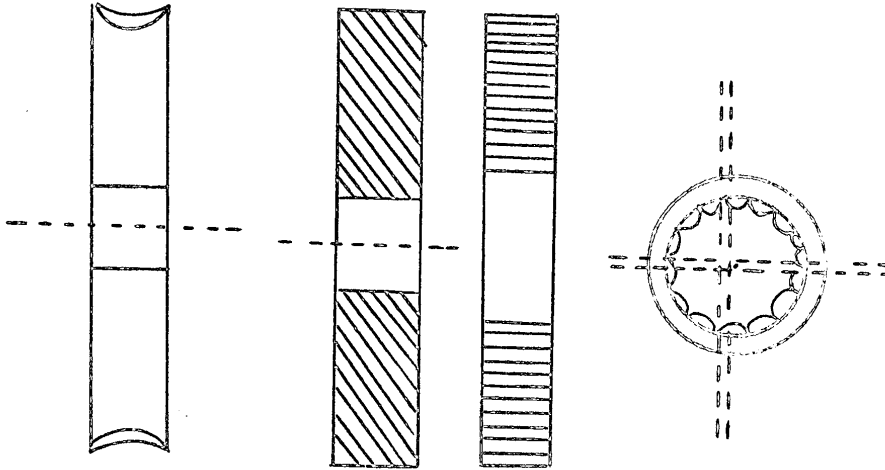
[redacted] due to poor organization. [redacted]

SECRET

25X1

SECRET

25X1



SECRET

25X1