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INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

C-O-N-F-I-D-E-N-T-I-A-L

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COUNTRY USSR (Ukrainian SSR)

REPORT

SUBJECT Bolshevik Machine Building Factory in Kiev: (produced military materials; explosives; info on various shops, including sketches, security, manpower & production)

DATE DISTR. 5 January 1959

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REFERENCES

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PLACE & DATE ACQ.

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SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

the Bolshevik Machine Building Factory in Kiev

The report contains a sketch of the plant with a legend listing 20 installations; an overlay of the part of a city plan of Kiev showing the location of the factory; a layout of the iron foundry at the factory with a legend listing 12 installations; and information on plant location, buildings, raw materials and their storage, production methods, finished products including type, quantity, packaging, and shipping; the water supply and electric power, safety precautions and security measures; the number of employees, working conditions and plant officials; and a "secret" shop controlled exclusively by the military where explosives, believed to be gunpowder, were unloaded.

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Comments:

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1. the total number of employees in this factory was 4,000.

2. the dimensions of the foundry building were 55 x 45 x 7 meters.

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STATE	X	ARMY	X	NAVY	X	AIR	15	FBI		AEC						

(Note: Washington distribution indicated by "X"; Field distribution by "#".)

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Attachment

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BOLSHEVIK MACHINE BUILDING PLANT IN KIEV

General Description

1. The Bolshevik Machine Building Plant, located in Kiev, Oktyabraskiy rayon, near Pushkin Park, was bounded by Brest-Litovskoye shosse on the north, Pervomaiskaya ulitsa on the east, railroad tracks on the west, and Dachnaya ulitsa on the south. On page 7 is an overlay, showing the plant's location. the plant was subordinate to the Ministry of Defense. The plant manufactured military materiel primarily. There was a "secret" shop, controlled exclusively by the military where explosives, believed to be gunpowder, were cautiously unloaded. All products manufactured in the bronze section of the foundry were destined for the Navy and most of the products manufactured in the other shops were either for military or agricultural use. The plant employed approximately 5,000, half of whom were specialists.

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2. The plant area, which was almost square in shape, was surrounded by a wall, part wood and part rubblework, which was approximately two and one-half meters high and had a 2,500 meter perimeter. The buildings were constructed before the Revolution and it was said that they had been occupied by Germans prior to that time. There were two front entrances, one for personnel and one for vehicles; both were on Pervomaiskaya ulitsa. Two rear exits connected with the rail siding which served the plant. New constructions were in progress between the laboratory, the machine and fitting shop, and the secret shop. On page 8 is sketch, showing the layout of the plant and the new construction site. Following is a list of the shops The numbers in parentheses refer to those on the sketch on page 8.

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(1) Steel shop
(2) Garage
(3) Blacksmith shop and forge
(4) Foundry (iron and bronze)
(5) Electric shop
(6) Secret shop which also contained electric transformers
(7) Compression shop
(8) Tool shop
(9) Offices, contained in a three-story building of recent construction
(10) Laboratory
(11) Sheet metal shop
(12) Machine and fitting shop
(13) Carpentry and model shop
(14) Boiler room
(15) Transformers
(16) Gardens
(17) Building under construction
(18) Clock tower
(19) Entrances
(20) Dumps for scrap, coal, and sand

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Foundry

3. The foundry produced iron and bronze. It employed between 2,500 and 3,000 in three shifts. The foundry was a fireproof one-story rectangular brick building with sheet-metal roof, about 200 x 50 x 15 meters. Part of the building had a second story containing offices. Many different products were manufactured in the foundry. One was a large cast-iron boiler, 2.5 meters in diameter, about four meters deep, weighing 15 tons, with thick walls believed to be more than two centimeters thick, grayish black in color, with a spherical or arched bottom, and four handles around the lip which were raised by a crane. Two boilers were produced daily. Other heavy parts of various shapes were also manufactured here, including slugs of great thickness.

4. In the bronze section of the foundry many parts made of different alloys were manufactured, the most important ones being tubing, valves, wheels, axles, and various types of gears. Almost all the materiel produced in the bronze section was under the control of the Navy which frequently sent committees to inspect and test the products.

5. The boilers and most of the materials manufactured in the foundry were transported by rail to other parts of the USSR and the production of the bronze section was sent to unknown ports.

6. The foundry contained the following installations, of good quality and in good condition; some was new of German and Soviet make.

2 gas furnaces
2 cast-iron gas furnaces
2 electric furnaces
1 kneading machine, which was used to make sand and mortar molds
7 bridge cranes, with capacities of 10, 15, and 25 metric tons
small mobile cranes, number not specified

7. In addition to the bronze section, the foundry contained a lathe shop and three bays. The second story portion contained offices of the chief engineer, draftsmen, and control and statistics sections as well as a dining room, social lounge, infirmary, models storage, and a small mixing and alloy section. See sketch on page 9, giving a breakdown of the foundry and its equipment.

Raw Materials

8. The raw materials brought to the plant were coal, iron, scrap-iron, copper, brass, lead, nickel, aluminum, sand, limestone, slag, wood, mineral oil, gasoline, lead oxide, white lead, copper oxide, gunpowder, and gas. Most were transported by rail The foundry used the sand, limestone, and slag; the wood was used for making models and for packing. A supply of some raw materials, mainly scrap-iron and coal, was kept on hand in the plant but there were no reserve stocks.

Water Supply

9. no general water reservoirs in the plant; there were a few small ones in various shops such as the forge and steel and iron foundries which were adequate for their own needs but not for general use. no water pumps; the water pipes were underground and water was furnished by the city.

Sources of Energy

10. The city provided the plant with electricity. Transformers supplying adequate electric power were located in a small shop to the rear of the plant. The electric cranes operated on 380 kilowatts, the plant's power-house on 130 kilowatts, and the electric furnaces on more than 1,500 kilowatts warnings of danger of death were posted around these.

11. A tall brick smokestack was located next to the carpentry shop and the foundry had at least two metal smokestacks about six meters high.

Production Volume

12. In addition to the fact that the iron foundry produced two large boilers daily, other items were manufactured in large quantities. the production volume was exceedingly high, considering the fact that the work was dangerous. The workers complained about the high production norms and on several occasions complained to the unions and to the director but nothing was done about this until 1956 when the norms were reduced.

Production Methods

13. scrap-iron was placed in furnaces and when melted, was put in molds previously prepared with a mixture of sand, dirt, and dregs. After various operations, the products, including the large boilers described in paragraph 3 above, were sent to other shops, usually one equipped with lathes. Raw materials were submitted to high temperatures. In the bronze section the material was placed in hermetically sealed electric furnaces and submitted to a pressure of centrifugal force. The mixture was turned over and over by means of a mechanical device and cylindrical parts emerged, made of bronze or a similar alloy and weighing about 250 kilograms. These parts were one of the items most thoroughly checked by the naval inspectors. The operation was dangerous and at least twice, between 1950 and 1952, the boilers exploded during the melting process, causing some victims among the workers. metal was purified in the bronze section Transport was done by means of cranes and electric cars; small parts were carried by hand. the electric furnaces were operated by pushing buttons placed on a nearby table where measuring apparatus was installed, the furnaces were automatic.

Packing

14. The finished products were packed in wood. When Navy representatives came to load material from the bronze shop, they brought packing materials with them or had them made under their supervision. Great care was taken in operating the cranes when handling heavy pieces, and materials were solidly packed and well centered on the railway platforms. Some items were given a coat of protective paint.

15. Most of the raw materials and finished products were transported by rail. Two railroad sidings entered the rear of the plant and were connected with the main line in Kiev. One of these sidings entered the plant at the north and serviced the steel and iron shops; the other entered through the south and served the carpentry and machine and fitting shops. Tracks were of Soviet broad gauge. Loading was done by cranes and the products were transported through the side entrance in closed railroad cars. These cars were

mostly wooden with two axles; the locomotives were also small and old. Three or four trains loaded with iron, scrap-iron, coal, and limestone came daily to the iron foundry. Each train consisted of four or five cars and each car carried about 20 tons. Iron arrived in blocks weighing approximately 500 kilograms.

16. Small trucks, and sometimes wagons, were used for transport with less frequency than the railroad. The Brest-Litovskoye shosse which led to the plant was a 20-meter-wide concrete road with good drainage, open to traffic at all times. In the plant's vicinity was a parking area, next to the steel shop, and there was a small shop for repair and lubrication of vehicles. From 30 to 40 three-ton Soviet-made trucks, loaded with sand and sawdust, came daily to the foundry

Storage and Safety Precautions

17. Materials were stored throughout various parts of the plant; some, such as scrap-iron, lumber, and coal, were stored under sheds. Dirt and sand were kept outdoors and other sensitive materials, such as copper, nickel, bronze, and aluminum, were stored in small quantities in each of the storage rooms in the shops. Some materials were kept near the railroad tracks which served the plant. Inflammable material was usually kept outside. The plant had reserve firemen who drilled occasionally. Boxes of sand, fire extinguishers, and water hydrants were located throughout the plant.

Security

18. Guards were posted at the entrance and railroad gates. Also, there was a constant guard within the area and around the secret shop. The guards belonged to the Okhrana, not further identified; there were approximately 40, both men and women, working in three shifts. The conventional propusk was required for admittance to the plant; there was no difficulty in visiting any place within the plant except the secret shop.

Work Schedule and Working Conditions

19. The normal work schedule was an eight-hour day, Mondays through Fridays, six hours on Saturdays, and three shifts. Sundays, official holidays, and vacations were observed.

the morning shift, employing approximately 1,000, consisted of eight hours; the afternoon shift, employing about 800, consisted of seven and one-half hours; and the night shift, employing about 600, consisted of seven and one-half hours, also.

20. There were no strikes. Complaints were made occasionally, both because of the high production norms and the low wages. Employees doing special work or missions received preferential treatment.

Plant Personnel

21.

a. Kornyenko (fnu), plant's director

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b. Svestyeniko (fnu), engineer specializing in cranes,

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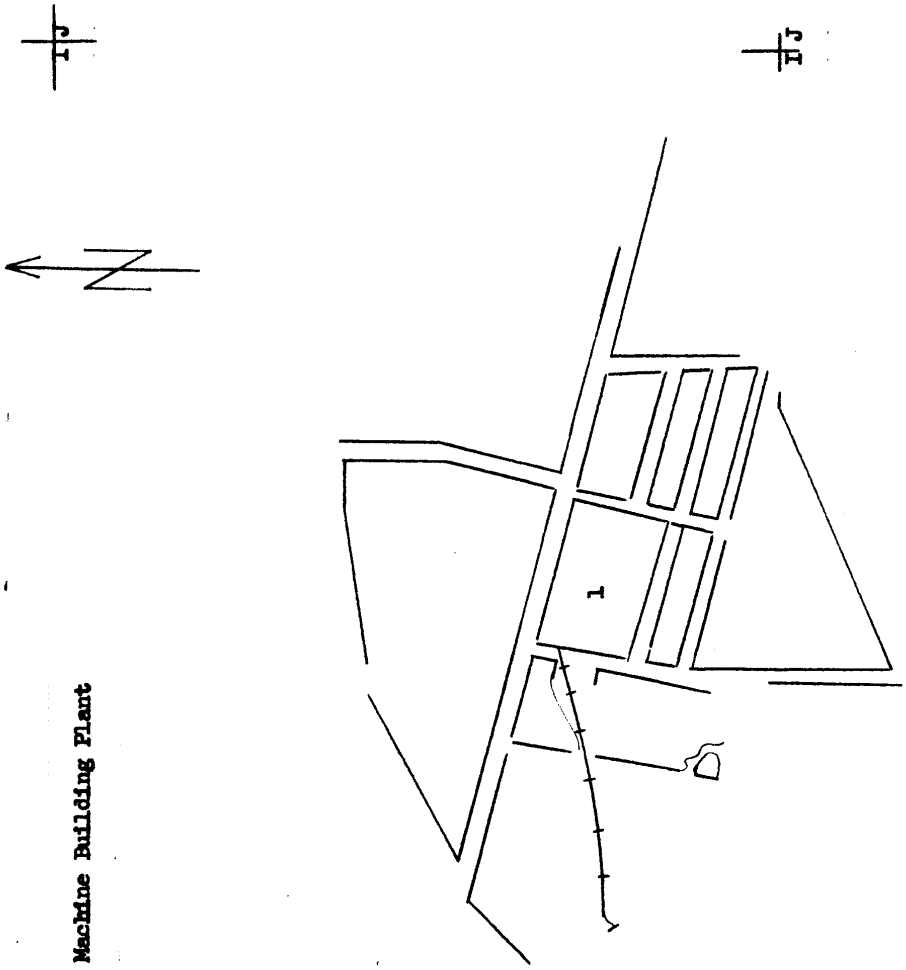

(1) -- Bolshevik Machine Building Plant

Overlay of Stadtplan Kiev 1:25,000

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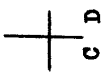

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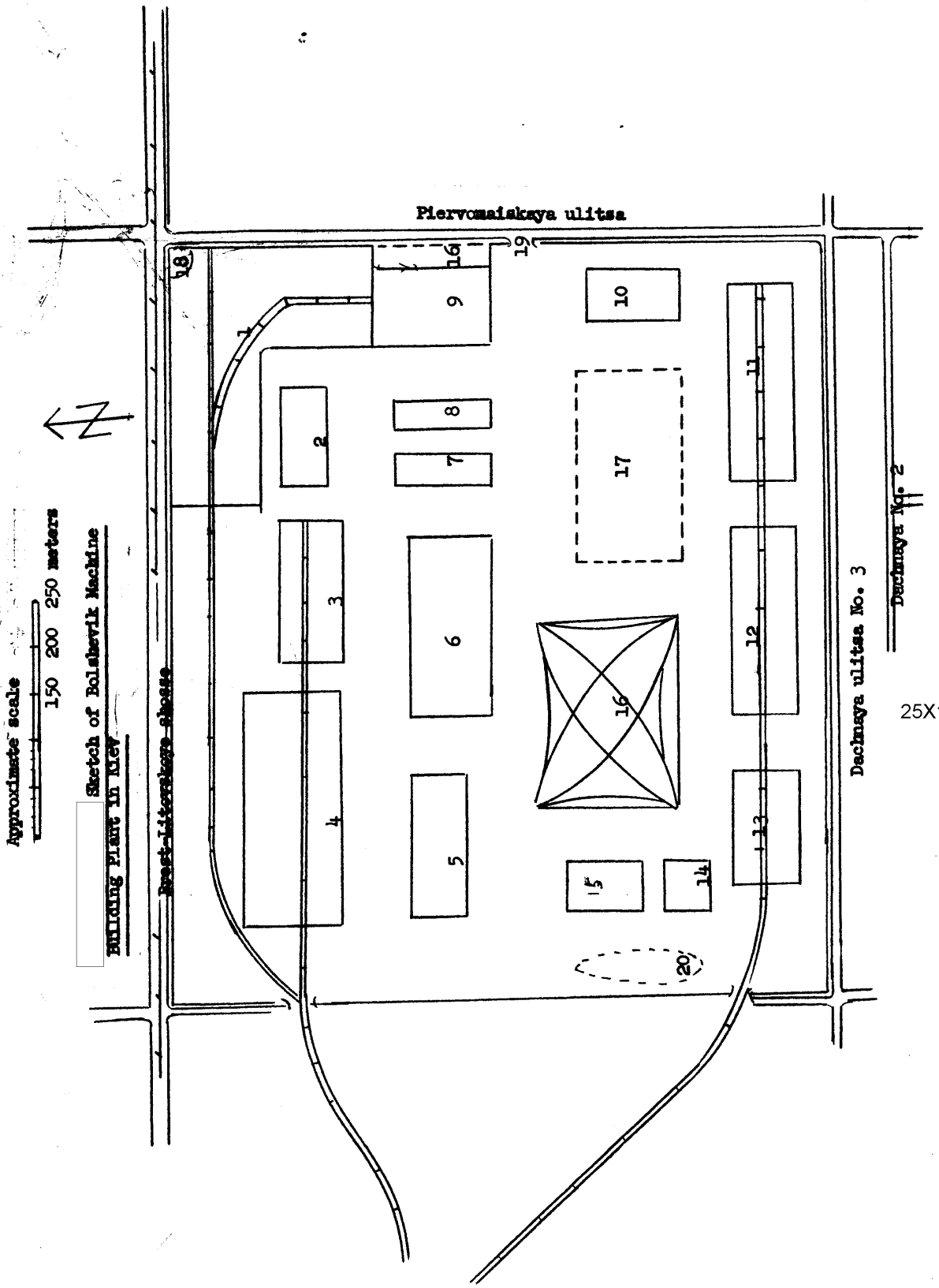

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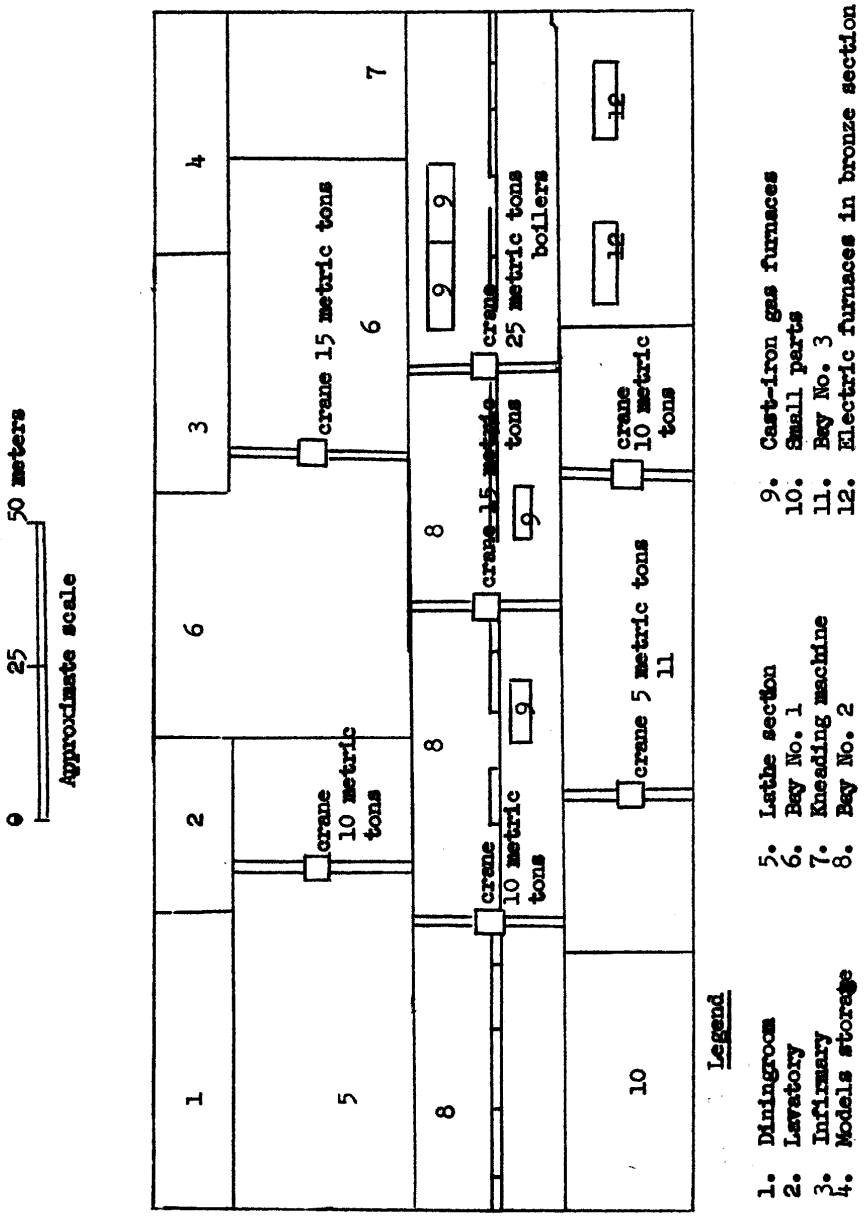
Layout of Iron Foundry of Bolshevik Machine Building Plant in Kiev



Legend

1. Diningroom
2. Lavatory
3. Infirmary
4. Models storage
5. Lathe section
6. Bay No. 1
7. Kneading machine
8. Bay No. 2
9. Cast-iron gas furnaces
10. Small parts
11. Bay No. 3
12. Electric furnaces in bronze section

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