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CLASSIFICATION CONFIDENTIAL

CENTRAL INTELLIGENCE AGENCY 25X1

INFORMATION REPORT

REPORT

CD NO. 25X1

COUNTRY USSR (Leningrad Oblast)

DATE DISTR. 18 Feb. 1952

SUBJECT Izhora Metallurgical Plant at Kolpino

25X1

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before its evacuation the plant also produced steel ingots, armor plates, shell cases and boilers in addition to the mentioned products. The production of tank hulls, armor plates, tank turrets, shields, guns, boilers for railroad locomotives and tubes was reported for the time of observation (see production). Production was resumed in the Summer of 1946 and about 40 percent of the plant was in operation in December 1947. Full-scale production was not reached early in 1949, workshop buildings 8 and 28 still being under construction.

3. Plant Installations: (the numbers [redacted] enumerations of the layout sketch-[redacted]ion of the plant installations is based o[redacted]r 11 sources. The plant sketch itself w[redacted]ording to an aerial photograph of September 19[redacted]

(1) Foundry (workshop buildings 10 and 25)

(a) Installation:

aa. Traveling crabs.

bb. Furnaces. The sources indicated the following varying figures (six to eight furnaces is considered a probable figure):

3 furnaces
3 furnaces , 6 to 8 meters high
4 furnaces
5 furnaces
5 furnaces , gas-fueled
6 furnaces (1 open-hearth furnace, 2 electric furnaces)
6 furnaces (open-hearth furnaces with 40-ton volumetric capacity each)
8 furnaces (4 open-hearth furnaces, 2 electric furnaces)
10 to 12 furnaces (8 to 10 small furnaces, 2 cupola furnaces about 10 m high, about 1.40 m in diameter, lined with fireclay stones; volumetric capacity of these two furnaces about 20 tons each.)

(b) Production:

The material to be smelted is conveyed by an electric suspension railway from the storage dump to the furnace top. (One source said the material is transported by cranes into the furnace). The base of the furnace is a square fireplace where the liquid iron is collected and tapped. The molten iron is conveyed in ladles by the suspension railway to the casting molds or to the six casting machines. Eighty tons of scrap or 40 tons of iron are processed in one smelting. The scrap smelting process lasts 24 hours, the pig iron smelting process 12 hours for each furnace. The ingots used

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for smelting weight 32 tons. The foundry has fully automatic operation. Blocks and parts are cast.

aa. Blocks: 2 m long, 0.5 square meter cross section
4 m long, 1 square meter cross section
80x40x40 cm
about 1.3 to 1.5 and 0.5 to 0.8 square meter cross section
1.5x0.4x0.5 m.

Weight: 45 cwt
2.4 and 32 tons.

Two blocks are cast from the contents of one ladle (4 meters in diameter and 3 meters high). Some of the blocks are resmelted before going to the molding shop.

bb. Exhaust flanges (192 pieces per shift, presumably about 600 daily). Bearing bushings (180 to 200 per shift, i.e. about 600 daily).

cc. Track shoes for tank tracks (width about 45 cm. 700 to 800 pieces per shift, i.e. about 2.250 pieces daily.

dd. Tank track supporting rolls, about 25 cm in diameter, 80 to 90 pieces per shift, ile. about 250 pieces daily.

ee. Engine blocks (4 or 5 pieces per shift, i.e. about 15 daily).

ff. Bogie wheels, axles, couplings, gear and chain wheels and other engine and machine parts.

gg. Tank cupolas similar to those of the T34, but with a wider gun side.

(2) Hardening shop (workshop building 15).

(a) Installation: Five to eight hardening furnaces, oil-fueled. One large and one small press, several traveling crabs, oil baths.

(b) Production: Armor plates coming from the rolling mill (workshop 11) are hardened. After hardening the plates are processed in workshop 7. The hardening shop has an annex (workshop 75) which was still being reconstructed in May 1949. In this annex the hardened plates are allegedly cut to sizes.

(3) Rolling Mill Department (workshop building 11 and 12).

(a) Installation:

aa. 1 blooming mill train
1 section mill train
2 plate rolling mill trains
1 tube rolling mill

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The following details were given:

2 roughing rolls for bar iron, 2 plate rolls.
2 paralleling mill trains, each 60 meters long and 4 meters wide, each consisting of three successive, 20-meter long sections for coarse, medium and finishing rolling. The operation of a new mill train was reported to have started in August 1947. Two rolling mill trains for plate, and thin sheet rolling with three rolls, about 80 cm in diameter and 350 cm wide. The roll stands are 450 cm high and 400 cm wide.

1 mill train for rolling of sections
1 blooming mill
3 billet mill trains, 4 plate rolling mill trains

In workshop building 11: 1 rolling mill train
In workshop building 12: 3 rolling mill installations
In workshop building 11: 2 blooming rolls, one of which for 32-ton-ingots.

The mill train is 80 meters long.

In workshop building 12: 2 plate rolls, 1 section roll, 2 blooming rolls
in workshop building 12: 3 rolls

In workshop building 11: 1 mill train

In workshop building 12: 1 blooming roll, 1 plate roll.

bb. Furnaces:

4 annealing furnaces, side by side, 8 meters high
4 annealing furnaces, antiquated system

several annealing furnaces, oil-fueled
8 furnaces, two not in operation
4 furnaces, 1 annular and 3 annealing furnaces
several furnaces (oil-fueled)

cc. Presses: one 12-m high steam press for pressing railroad ties

dd. 4 traveling cranes (3 large and 1 small crane)

ee. 1 head lathe ('Kopf Drehbank')

1 leading screw lathe, Walldrichtmake in Siegen

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(b) Production: The ingots allegedly remain in the annealing furnaces for 10 hours. They are heated to 1,200 up to 1,500 degrees and are then transported on steam-driven rolls to the rolling mill department. When the bloom has passed the first stand of rolls it is turned, the running gear reversed and the rolling process is repeated. The blooms are rolled into

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aa. plates and sheets of the following sizes and gauges:

18x4 meters, 25 cm thick (2 in 12 hours)
6x2 meters, 8 to 10 cm thick (30 in 12 hours)
1.5 to 2x0.7 to 1 meters (2,700 sheets per shift)
8.12 and 15 cm thick
5x2 meters, 4 to 8 mm and 8 to 12 mm thick
5 to 20 mm thick
20x2 meters, 12 to 15 cm thick (ship hull plates(
4x1 meters, 0.5 cm thick (steel plates)

The plates are so long that they have to be loaded on two coupled flat cars (width 2.90 to 3 meters, thickness 15 to 22 cm) (workshop building 11). 6 to 8x1.4 meters, 8 to 10 mm thick. 345 plates daily, 4 plates made from 1 bloom (workshop 12)
5x2.15 meters, 10 to 12 cm thick.

The 8-hour shift norm at one blooming mill is 130 to 140 tons of rolled material.

Some of the plates go to the hardening shop, same are shipped to Leningrad in unwrought condition. The plates are used as armor plates (and ship hull plates.

bb. Round iron and square iron and structural iron with 6 to 18 cm diameter are made from 500x80x80 cm blooms.

(4) Tube rolling mill (workshop 26)

(a) Installation unknown.

(b) Production:

Tubes about 6 meters long, 12 cm in diameter, presumably gun barrels for tanks,

Tubes, 15 meters long, 3 cm in diameter, made of solid round iron, about 20 meters long and about 6 cm in diameter. (Round iron of these measurements are delivered to the plant). The tubes are drawn on special machines while red hot, pass on conveyor belts through a water and oil bath and are then shipped immediately by rail.

Tubes 90, 100 and 120 mm in diameter

Tubes, 8 meters long and 10 cm in diameter

Tubes, seamless steel pipes, Mannesmann system, 8 to 10 meters long, 40, 60, 80, 100,120, and 180 mm interior diameter. They are mostly shipped away.

(5) Latheshop

(a) Installation: The machines were replaced by new ones in the Summer of 1945.

aa. Lathes

Between 15 and 30 lathes, VdF, German, American, French and Czech makes, including 10 automatic lathes for screws etc., were reported.

bb. Milling machines

Two to four milling machines of Czech Skoda make were reported.

cc. Drilling machines

2 drilling machines, type Rabo, German make

dd. Planers

2 planers, Waldrich type, Koburg, ~~(M 51/6 86)~~, construction year 1944, German make

ee. Shaping planers

3 shaping planers, Klopp type, construction year 1944, German make

ff. Hydraulic presses:

2 hydraulic presses

(b) Production

Repair of plant-owned machines and implements
Screws, turned parts for machines etc.
Shafts, gear wheels and bearings
Spare parts for machines of the plant

(6) Electric-mechanical workshop (workshop building 28)

(a) Installation unknown

(b) Production:
Servicing and repair of the electric motors of the plant. Allegedly also construction of fittings and electrical installation for tanks

(7) Assembly shop, autogenous welding shop and mechanical workshop (workshop 2)

The workshop building has three sections. Construction was started in 1946 and completed in the Spring of 1947. 25X1

(a) Installation:

Presses
6 cranes including two electric cranes
12 welding aggregates, Finnish make
lathes, grinding machines, milling machines,
drilling machines and planers.

[redacted] drafting department (7a of the annexed [redacted] rkshop building. Pws were strictly forbidden [redacted] r this department.

aa. Tank cupolas and tank turrets

Tank cupolas, armored turrets for ship guns, about 2.5 meters high, consisting of three welded parts. The center part was shaped like a trapezoid with an opening for the gun barrel and several smaller square apertures. Thickness about 3 to 4 cm (Annex 4)

bb. Welding operation:
Autogenous welding, electric welding. The plates to be welded average 80 to 100 mm in thickness (the front parts are thicker).

cc. Assembly shop

Tanks or tank hulls are allegedly assembled from 20-mm thick plates. These plates are cut from 4x3-m plates and electrically welded. They are shipped at night to the Kirov Plant in Leningrad for completion.
Eight Joseph Stalin tanks are assembled in 24 hours without engine guns, optical or electric fittings. They are shipped by rail at night in the direction of Leningrad.
Front and lateral walls are also mounted on the tank chassis in this shop.

dd. Milling and drilling of armor plates of various sizes and shapes. Square and rounded plates for tank turrets, gauge estimated at 80 [redacted].

(8) Workshop under construction. This is a mechanical workshop with planers, lathes and drilling machines for plant railroad maintenance work. A forge is also said to be here.

(9) Construction of locomotives

(a) Installation: one 500-ton press, one smaller hydraulic press

(b) Production:

aa. Locomotives with boilers, driver's cabins and tenders, without equipment, armored locomotives, completed boilers were presumably only mounted on chassis which were delivered to the plant.

bb. Gun shields for AT guns, 12 to 15 mm thick, 1.2 to 1.5 meters wide, 1.6 to 1.8 meters high, with apertures ranging from 30 to 70 cm in diameter. Each of the shield wings is 45 cm wide. Gun shields for twin ship guns, 15 to 18 mm thick, 2 meters wide, 2.5 meters high with vertical 30 to 35-cm wide openings for gun barrels were also reported. Gun shields 13 mm thick, 4 meters wide, 3 meters high with 30 to 40 cm wide and 70 cm high openings were mentioned by one source. This production is probably still part of the assembly shop (para (7)).

(10) Construction of steam boilers

(a) Installation:

Presses, machine tools and welding installations, Kjellberg make.

(b) Production:

Steam boilers for locomotives, about 8 meters long, 1.8 meters long, 1.8 to 2 meters in diameter thickness of boiler wall 20 to 60 mm provided with four pipe sockets. Daily production 5 or 6 boilers. One boiler each was loaded on one railroad car. Steam boilers for ships and industrial installations were also reported.

(11) Destroyed buildings still in ruins.

(12a) and (12b) Sawmills

(12b) is a pattern-making shop

(13) Workshop building under construction.

Another steam boiler department is being reconstructed. The department is housed in two workshop buildings side by side. The department is to be completed by the summer of 1950. The installation consists of various kinds of machine tools.

(14) Locomotive shed and repair d[redacted]ent where locomotives are parked and repair[redacted]tives and one small shunting locomotive [redacted]on. Three German wartime locomotives and [redacted]ocomotives are parked in the building.

(15) Transportation administration

(16) Boiler houses

(16a) Seventeen twin flue boilers, heating surface 120 square meters each. This boiler house supplies the rolling mill.

(16b) Seven fire-tube boilers, heating surface 90 square meters each (Scotch system); 20 twin flue boilers, heating surface 120 square meters each. This boiler house supplies the rolling mill.

(16c) New structure. Six water-tube boilers. Heating surface 250 square meters each. This boiler house supplies the rolling mill.

(16d) It supplies workshop building 9.

(16e) Six flue boilers, heating surface 120 square meters each. It supplies workshop buildings 2,7 and 15.

(17) Electric power installations

(17a) Switch gear station

(17b) Transformer station for the different departments

(18) Depot for metals with three pumps and three tanks-containers, about 3 meters underground.

(19) Depot

(20) Dispensary

(21) Laboratory

(22) Administration

(23) Foundry (Zeche Martin I) under construction

(a) Installation: Four open-hearth furnaces. One has been restored. The second furnace was to be completed by the Fall of 1949.

(b) Production: allegedly thermal refining of steel for blooms

(24) Fire department, It had modern installation

(25) Transformer station. Power is supplied thro[redacted] a long-distance transmission line allegedly fro[redacted] Neva Power Plant.

(a) Installation:

The transformers are outside the building. The motors of the station are operated at 380 Volt A.C.

(26) Filling station which is partly underground.

Installation:

3 pumps, 3 tanks (8 tanks according to one source)

(27) New power plant under construction. A TETS (DKV), steam power plant, construction started in 1948, scheduled for completion by 1950.

Installation:

One American vertical tube boiler, 28 meters high, weighing 5,000 tons. Heating surface allegedly 1,400 square meters. The installation of a second similar boiler is planned. Five generators, three coal-milling plants, coal elevators and blast engines. The PW Camp is now in the old power plant.

(28) New construction was not completed in May 1949. One source indicated "destroyed workshop buildings" here.

(29) Forge

(30) Production of welding electrodes

(31) Oxygen department

(32) Old ship repair plant. The installation is in ruins and the debris had not been cleared in May 1949.

(33) School with 200 pupils between 16 and 18 years of age.

(34) Gas works

(35) Garage

(36) Oil dump

(37) Storage place for bars

(38) Coal dump 1

(39) Coal dump 2

The following additional installations were mentioned:

A test firing stand for AT guns (not used), a scrap warehouse and a storage place for dismantled German machines

4. Production:

a. Kind of production

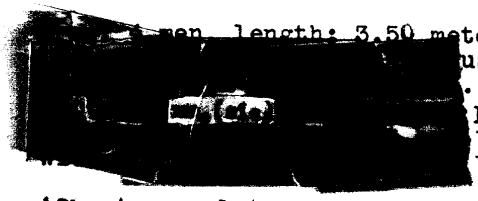
(1) Tanks. Tanks were repaired towards the end of the war and it was explicitly stated that complete tanks were no longer manufactured after November 1945. It was reported however that covered tanks were shipped out of the plant during the night.

Tank coverings ("Panzerverschalungen") without suspensions, tracks and engines, tanks without bogie wheels, guns, tank hulls and superstructures and technical installations were also reported.

The tank hulls are allegedly shipped to the Kirov Plant in Leningrad for final assembly.

The sources supplied the following confused and hardly usable information on the development of a new tank type in the Izhora Plant:

The wooden model of a new tank type was mentioned in the Spring of 1946. A test model of the new tank type was manufactured in the Fall of 1946. The production of a very small tank type was mentioned again in February 1947. The tank was apparently completed in April 1948. A new tank type (flatter in design than the T34) was again mentioned early in 1949. Production started early in 1949. The hull of the new tank type had the following specifications:



men, length: 3.50 meters, width: 1.8 meters, uspensions): 70 to 90 cm; . Front armor plating plating 100 to 120 mm. two hatches on top, each to 50 cm (sketch Annex 5).

(2) Armor plates

Thickness up to 10 cm

All dimensions of armor plates to be used for ships and as artillery gun shields varied as follows:

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3 to 4 cm thick
5 to 10 cm thick
18 to 20 and 25 mm thick, 4x3 meters size
8 cm thick
2 to 2[redacted] cm thick
10 to 15 cm thick, 2x5 meters in size
2 to 10 and 15 cm thick, 3x8 meters in size
1.3 cm thick
0.5 to 2 cm thick
2 cm thick, 3x1.6 meters in size
3.5 cm thick, 3x1.6 meters in size

(3) Gun turrets for tanks, ships and fortifications ((7b) of plant layout sketch and Annexes 4 and 5)

(4) Chassis for T34 and self-propelled guns (probably only repairwork is being done) and automatic guns.

(5) Gun shields for guns, AT guns, ship guns and twin ship guns (para(9b) bb of the plant layout).

(6) Guns and ship guns and gun parts

(7) Boilers for locomotives, steam boilers for locomotives, ships and industrial installations (see para(10b) of plant layout).

(8) Locomotives. The locomotives are shipped to Leningrad with boilers, driver's cabin and tanders, but without installation. Armored locomotives are allegedly manufactured and castings for locomotives produced according to some reports. They are tooled and shipped away for assembly (para (9) (b) aa. of the plant layout).

(9) Tubes (see tube rolling mill para (4) of the plant layout).

Railroad ties are also allegedly produced.

b. Amount:

The indications on the tank hull production vary considerably. Some of the production figures also include tank repairs. The indicated monthly output of 60 units is considered probable.

The following varying production data was furnished:

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14 to 16 units weekly
2 " "
3 to 4 " "
4 " "
8 " "
18 " "
20 " "
30 " "
60 " "
60 " "

5. Power and Raw Materials

Power: the old power plant (steam power plant, 1941 installed capacity: 24,000 kws with two machine sets 12,000 kws each) is destroyed. At the time of observation it served as a PW camp. The new power plant will allegedly be completed by 1950. (See power Plant (27) of plant layout). During the time of observation power was supplied from an outside plant, probably Leningrad.

Incoming raw material shipments:

(1) Metal blocks

(2) Armor plates supplied from Stalino (48°00' N/37°48' E) and armor plates from the foundry of the Lenin Plant in Leningrad.

(3) Coal

(4) Oil

6. Work Force and Working Time

The indications on the labor force vary considerably. The estimated total work force is 20,000 to 25,000 men. Work is done in three shifts of eight hours each.

7. Security

The plant is surrounded partly by a wooden fence, partly by a brick wall and partly by a barbed-wire fence. There are armed guards (some of them women).

25X1 [redacted] Comment:

According to this report the Izhora Plant in Kolpino supplies tank hulls to the tank industry. Its production is connected with the production of the Kirov Tank and Tractor Plant in Leningrad as the production of the Plant No 264 in Krasnoarmeisk (48°31' N/44°34' E) is connected with the production of the Red October Plant in Stalingrad (48°45'N/44°25' E).

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5 Annexes

25X1 [redacted]

(2) and (3) Izhora Plant in Kolpino, Leningrad Oblast

(4) Gun Shield for Ship Artillery

(5) Tank Hull

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25X1 [redacted] 25X1

Number	Civilian profession	Employed as
1	Foundry foreman (White Russian deserter)	Auxiliary workman
2	Orchestra conductor	Auxiliary workman
3	Merchant	Building workman
4	Gardener	employed in clearing work
5	Bricklayer	bricklayer
6	?	employed in the foundry
7	....	not employed in the plant
8	....	Auxiliary workman
9	Butcher	Auxiliary workman
10	Locksmith	Locksmith (also in the repair department)
11	Farmer	in the kitchen
12	Glass cleaner	in the foundry and in the rolling mill
13	Farmer	Auxiliary workman
14	.....	Auxiliary workman
15	Newspaper Soviet Army	
16	.....	Auxiliary workman

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Attachment 1

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Number	Civilian profession	Employed as
17	Mechanic	Workman
18	Fitter	employed in clearing work, in unloading of coal and in construction work
19	.....	Auxiliary workman
20	Post inspector	employed in various departments
21	Mechanic	in the lathe shop
22	Farmer	employed on the construction of bases for machines in the lathe shop
23	Farmer	Auxiliary workman
24	Merchant	Auxiliary workman
25	Workman	Building workman
26	Bricklayer	Building workman
27	Bricklayer	Auxiliary workman
28	Butcher	in clearing work, in the rolling mill while servicing a shaking grate and as molder in the foundry
29	....	Auxiliary workman
30	Carpenter	Carpenter
31	....	Building workman

Number	Civilian profession	Employed as
32	a. driver b. student	Building workman
33	a. Office clerk	Bricklayer, later in the foundry
	b. Regular soldier	Foundry and rolling mill
34	Student	Auxiliary workman
35	Merchant	in clearing work at the spur tracks
36	Newspaper Soviet Army	
37	Carpenter	Carpenter
38	a. Farmer	a. until May 1948 as stoker in the boiler houses I and II b. Painter
39	Carpenter	Transportation workman
40	Locksmith	as auxiliary building workman until early in 1947, later as lathe hand
41	Cook	in clearing work, reconstruction work and as stoker
42	Plumber and fitter	Fitter for heating systems
43	Butcher	Auxiliary workman
44	Press photographer	not employed in the plant
45	Railroad worker	Stoker in the boiler house
46	a. Driver	a. Camp commander

[redacted] 25X1

25X1

25X1

25X1

Number	Civilian profession	Employed as
46	b. Pilot	b. in charge of work details, employed in transportation work
	c. Engineer for heating system	c. Construction of heating installations
47	a..... b..... c.....	a. Locksmith b. Blacksmith c. Precision mechanic
48	Blacksmith	December 1945 to February 1946 in the foundry; March to April 1946 in the rolling mill; May 1946 to July 1947; cutting of armor plates; August 1947 to February 1948; excavation and clearing work.

[redacted]

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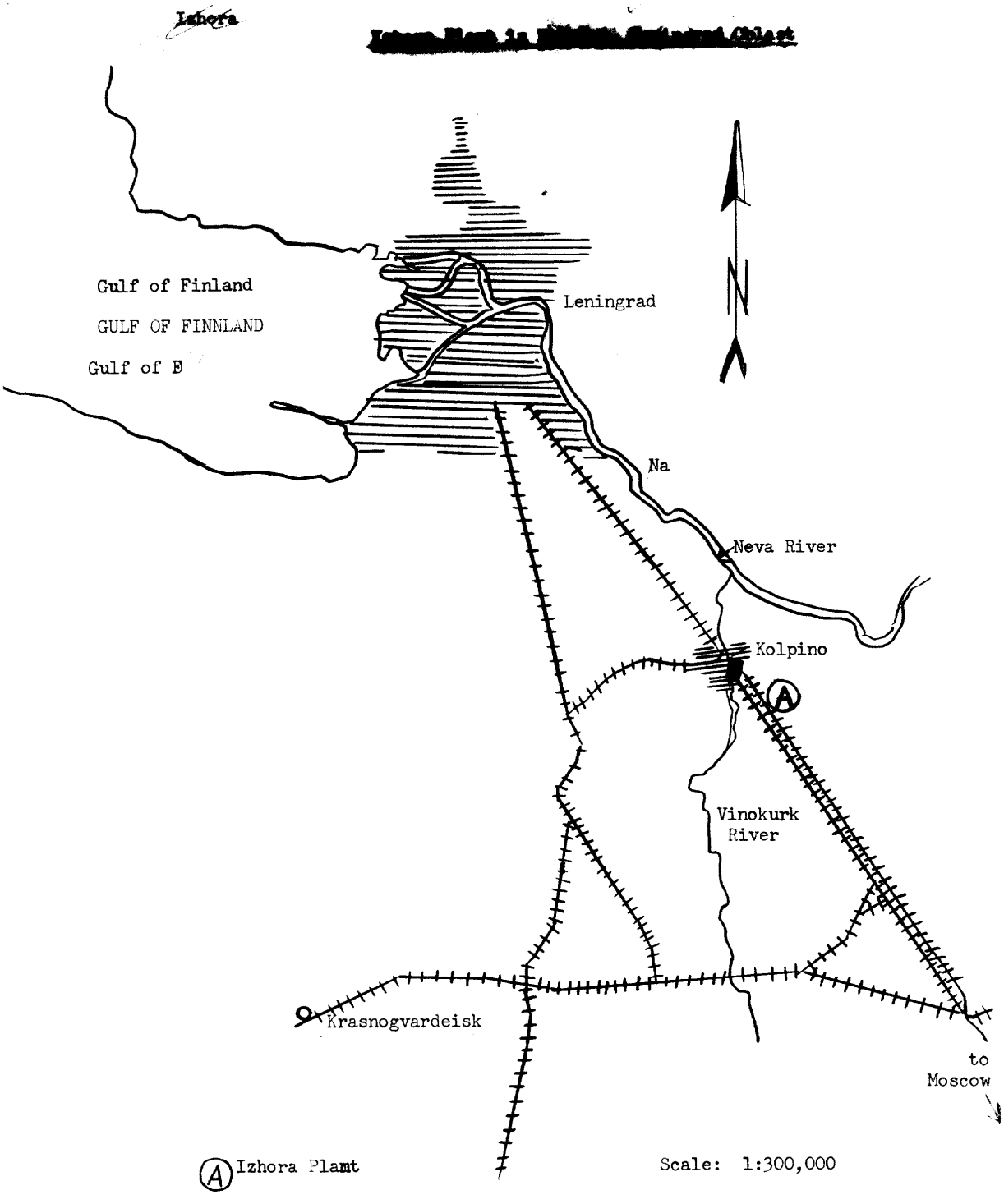
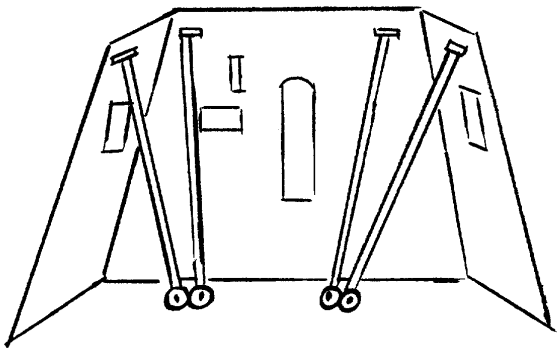


Legend to Annex 3

1 Foundry
2 Hardening shop
3 Rolling mill department
4 Tube rolling mill
5 Lathe shop
6 Electric-mechanical workshop
7 Assembly shop, autogenous welding shop and mechanical workshop
8 Workshop buildings under construction
7a Drafting department
9 Construction of locomotives
10 Construction of steam boilers
11 Destroyed buildings
12a Sawmills
12b Pattern-making shop
13 Workshop building under construction
14 Locomotive shed and repair department
15 Transportation department
16a through e boiler houses
17 Electric power installations
17a Switch gear station
17b Transformer station
18 Warehouse for metals
19 Depot
20 Dispensary
21 Laboratory
22 Administration
23 Foundry
24 Fire department
25 Transformer station
26 Filling station
27 New power plant under construction
28 New building
29 Forge
30 Production of welding electrodes
31 Oxygen department
32 Old ship repair plant
33 School
34 Gas works
35 Garage
36 Oil dump
37 Storage place
38 Coal dump 1
39 Coal dump 2

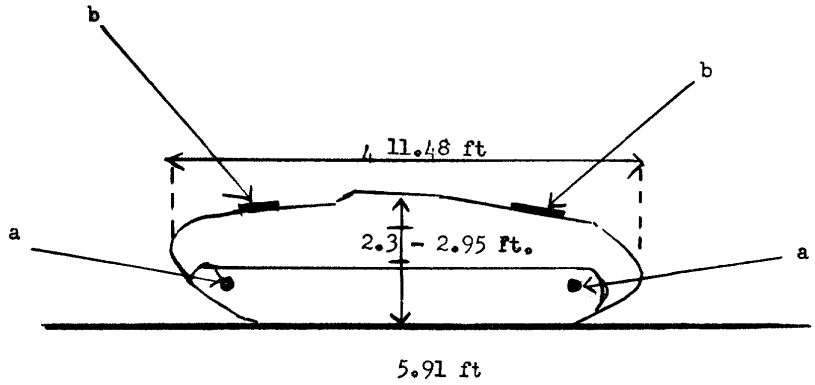
Gun Shield for Ship Artillery



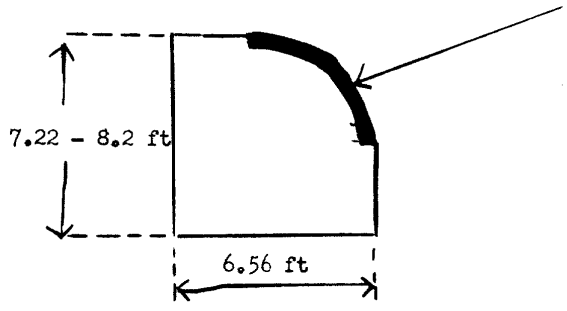
Tank Hull

Legend:

a. Hub
b. Hatch



Gun Shield for Ship Artillery



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Annex 3

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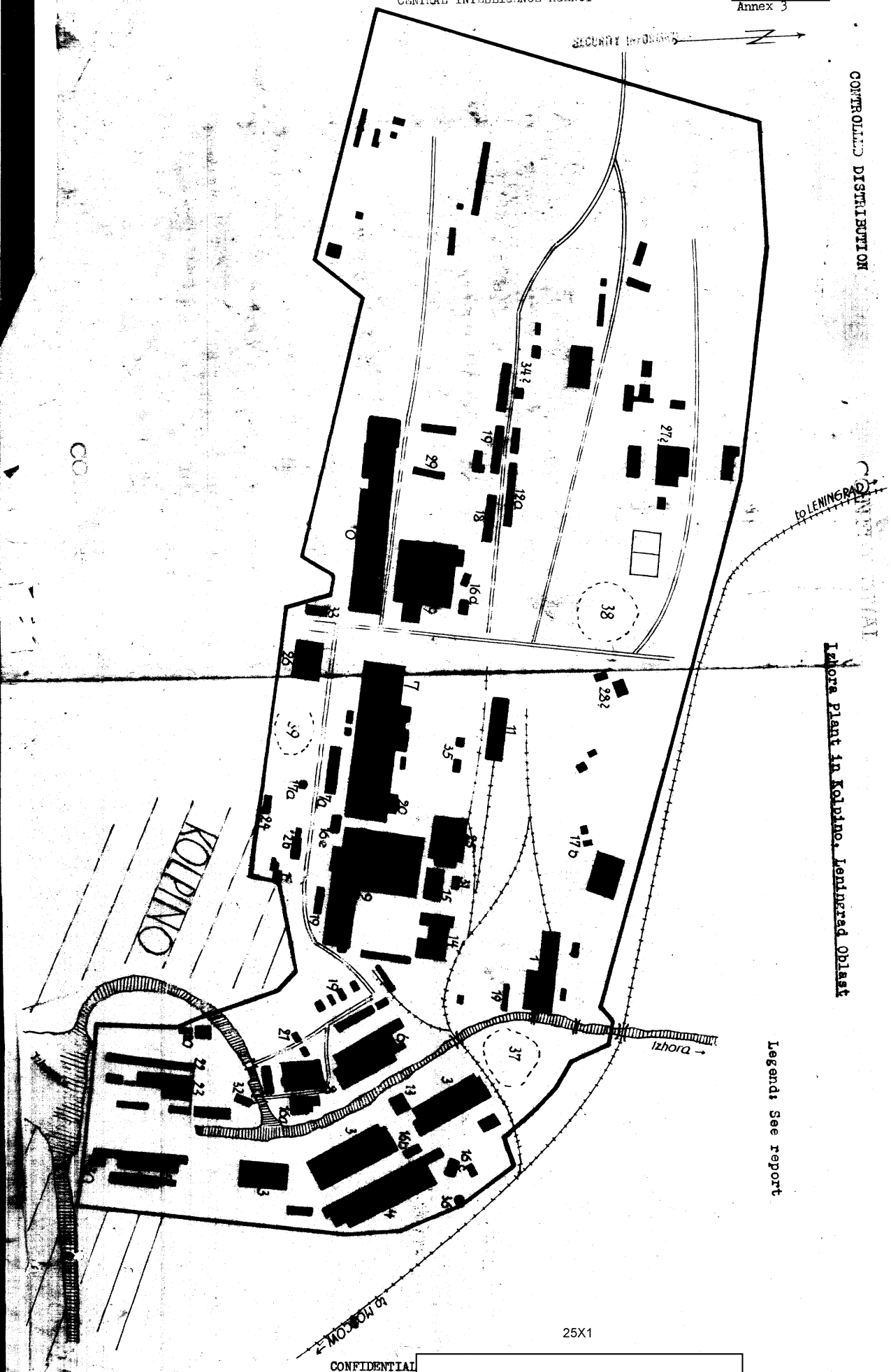

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