CONFIDENTIAL/CONTROL-US OFFICIALS ONLY

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

REPORT

CD NO.

COUNTRY USSR

DATE DISTR. 29 JUNE 1949

SUBJECT Armament Combine No. 172 in Molotov

NO. OF PAGES 9

PLACE ACQUIRED

NO. OF ENCLS. 3 (LISTED BELOW)

DATE OF IN

SUPPLEMENT TO REPOR

THIS IS UNEVALUATED INFORMATION

1. Location. Armament Combine No. 172 is situated on the outskirts of the town of Molotov, formerly Perm, in the locality of Motovilicha (sic). This town has formed a protected area since new armament works were established here in 1940.

2. The factory area of Combine No. 172 is situated on the left bank of the Kama River at the estuary of the tributary Igoshikcha (sic). It covers an area 12 km long and 1.5 km wide along the Kama River. On the opposite side the boundary is formed by the factory railway connecting the Molotov, Nizhni Tagil, and Sverdlovsk Combines.

3. Construction of factory buildings along the longitudinal axis of this area was begun in 1944. The area is subdivided into three sectors: the lower, the center, and the upper sector.

   a. The lower sector extends one km from the Igoshikcha upstream and serves as a test firing range. All guns produced by the combine undergo tests here. The targets are on the right bank of the Kama in a wooded area 42 x 12 km.

   b. The center sector is separated from the lower one by a strip of land 300 m wide, which serves as an entrance road for the personnel. This sector extends 5 km upstream from this strip and contains nearly all workshops and administration buildings.

   c. The upper sector is divided from the center sector by a similar strip serving as a road to the workmen's settlements, situated on the right bank of the river. Transport across the river is carried out by motor boats. The upper sector is four km long and contains the depots for material and spare parts, as well as loading facilities on the river bank. In the area contiguous to the upper sector there is a sawmill, and beyond that the new factory area on which construction of new workshops was begun in 1944.

4. Production. Armament Combine No. 172 is popularly known as "Father of the Russian Artillery" because it is the largest center for the manufacture of guns within the Soviet Union.

5. This combine is 90 per cent self-contained in that it processes all raw materials required for its output.

6. Ores used here are taken from the Kuznets and Magnitogorsk Combines. Coal is received from Kuzbas and Kizbas. There are no special lines of communication from these areas to Combine No. 172.

7. Non-ferrous metals such as copper, zinc, and tin, come from the Krasnouralsk Combine.

8. There are three electric smelting furnaces for the production of special steel such as high-speed steel.

9. High-speed steel is composed as follows:

0.6 - 0.75	carbon
18.0 - 20.0	wolfram
4.0 - 6.0	chrome
0.1 - 0.2	vanadium
0.2 - 0.3	manganese

It has a hardness of 1300 (Brinell).

10. The following types of steels were produced:

Chrome - nickel steel
Chrome - molybdenum steel
Stainless steel
"Uglirodistaja"
High speed tool steel
"Sietoczno-niepronicajemaja/siatkowo-nie - przepuszczajaca (reticulated, impermeable; sic)

11. In the Novy Prokatny were seven rolling mills, type Demag. All were working. Maximum breadth of plates is three meters each.

12. The armor plates used in tank manufacture, the 24 mm plates of "sietoczno - niepronicajemaja" steel, are able to withstand 20 mm shells at 300 meters.

13. Research of a secret nature surrounded the production of "sietoczno-niepronicajemaja". Further research was carried out with a 1.5 mm steel for steel helmets. This steel resisted 7.5 mm bullets at a distance of 100 meters.

14. Production up to the end of 1944 was as follows:

a. Long range field guns: M - 19 and M - 20, both 152 mm with recoil brake actuated by the gases from discharge. Experts consider that these types proved particularly satisfactory during the war. The gun carriage, a special pattern owned by the factory, is equipped with two gas compressors which make a vertical range of 80° possible so that the guns can be used as anti-aircraft weapons. In order to reduce weight when travelling over bad ground, the barrel could be dismounted in a forward direction by a simple device and carried on a special four-wheel vehicle (prismatic contrivance). These guns were first put into production in 1936. By 1944 2,170 had been produced. The production plan for 1944 provided for 475. The gun is mounted on solid rubber double wheels.

b. Howitzer "6" (field howitzer, 150 mm): This is the old type 6-inch howitzer, modernized in 1939. Three hundred of these were produced in 1944.

c. Field gun, 110 mm*: An entirely new weapon intended for artillery brigades incorporated with infantry divisions. Considered by experts to be a first class weapon with a range up to 28 km. Serial production was begun in 1940.

d. Spare parts for the following:

Field guns, 76 mm
Mountain guns, 76 mm
Infantry mortars, 100 mm
Shells 152, 150, and 110 mm
Component parts for 75 mm and 88 mm AA guns (about 40-50 sets per month)
These semi-finished components were delivered to Armament Factory No. 8 i/n Kalinin in Moscow.
Armor plate for armored cars, 25-60 mm. This was delivered to Voroshilov armament works in Leningrad and to the armament combine in Chelyabinsk.
Steel ("Szyboktnaca").
Various other orders for heavy armaments industries.

15. The production of shells of all calibers amounted to approximately 18-20,000 monthly. Shells were assembled in some works known as Kuszva, 150 km east of Molotov in the Urals.

Organization of Production

16. Metallurgical section

Mining
Fireproof bricks
Chamotte
Gas for Martin furnaces
New Martin works
Old Martin works
Steel profiles
Non-ferrous metals
Welding shop
Welding shop for large pieces
Press and forging shop
Stamping mill
Sheet iron rolling mill
Molding shop
Two supplementary workshops

In the new Martin works were ten furnaces, constructed in 1933-34, each producing 50-60 tons per furnace daily. The old Martin works had eight furnaces.

17. Mechanical section

Shop No. 1 - Initial processing
" " 2 - Finishing
" " 3 - Breech blocks
" " 4 - Shells
" " 5 - Technical tests
" " 6 - Gun carriages
" " 7 - Compressors
" " 8 - Gun barrels
" " 9 - Not identified
" " 10/I - Gun sights
" " 10/II - Testing and fitting of optical gun sights received from OGPU factory in Leningrad
" " 11 - New constructions
" " 12 - Not identified
" " 13 - Assembling of guns
" " 14 - Welding shop for guns
" " 15 - Instruments

18. Auxiliary sections

a. Section of the Chief Mechanic, responsible for maintenance of all mechanical equipment and for installing new equipment.

KB (inventory)
PPR (planning and refitting)
Mechanical refitting shop
Mechanical fitting shop
Shop for motor cranes
Shop for electric installations
Boiler shop
Repair shop for manometers

b. Section of Chief Engineer for Power Supply, responsible for electrical power station, production and distribution of current. Sixty per cent of power was supplied from the hydroelectric station at Khubacha (sic).

Boiler works Nos. 1, 2, 3
Electric-technical assembling shop
Water supply and sewage

c. Transport section

Motor transport depot: 200 trucks, 60 motor cars, 10 tractors, 20 artillery tractors
River transport: 3 tugs, 20 motor boats
Railway transport: 12 locomotives belonging to the combine, 500 trucks
Air transport: 3 transport aircraft

The Director-General up to November 1947 was [redacted] engineer Vinnikov, [redacted] 50X1-HUM

19. Administration

Head Office: Director-General
1st Assistant and Technical Director
Assistant and Chief Engineer for Metallurgy
" and " Mechanical Engineer
" and Commercial Director
" and Chief Architect (new buildings)
" and Chief of Personnel and Administrator (member of MVD)
" for housing, education, and propaganda

b. Technical Administration: Chief of testing section for materials
" constructor
" statistician of production
" of production planning
" " economic planning
" " financial section
" " material section
" " special section (MVD)
" " mobilizing section
" " dispatch section
Commander of MVD security troops (2 battalions)
" " fire brigade (3 sections).

20. Personnel

In December 1944, the combine employed about 800 engineers, about 2,000 foremen, and over 40,000 workmen in the main works. The total number employed was about 50,000 (sic). The total number of occupants of two settlements, including factory personnel, was 150,000. Employees and workmen are not allowed to live outside the factory settlements.

21. Party Organizations

a. The Party Committee is subordinated to the District Committee, which nominates the Secretary of the Factory Committee. The latter is then elected by the party members of the combine. Every workshop, section, and office has its own Communist cell under a secretary. If the membership of a cell reaches 300, its secretary is free from factory work.

b. Trade union committee, whose chairman must be a member of the Communist Party.

The above organizations concern themselves exclusively with the interests of the State. Jointly with the Director-General, they form an operational triangle. Their task consists in compelling the employees and workmen to render maximum output by applying threats.

22. Cadre Section (employment and discharge of labor). This section keeps the personal records of all the employees and workmen. Its chief must be a member of the Executive of the Party Committee and a member of MVD. The Political Section is subordinated to the Director-General of the combine and to the District MVD.

23. Prior to employment of an individual, all personal documents must be given to the Cadre Section. The candidate is then brought before the inspector, who fills in a questionnaire containing 68 questions, inter alia full personal data, social background, party membership and activity, and family relations. Possible contacts abroad are given special scrutiny. For purposes of checking, candidates are required to write out a complete curriculum. When results are considered satisfactory, usually a fortnight later, all personal documents are withdrawn from the candidate. He receives, instead, a certificate with his photograph stating, inter alia, that his personal papers have been deposited in the Cadre Section of the combine. To guard factory secrecy, these certificates do not contain the slightest indication of the nature of the work or of the identity of the factory. After this, the candidate must submit to a six-hour briefing regarding working regulations. Then he is given a medical examination. Finally, he is required to sign an undertaking of silence "under penalty of death". The candidate then reports once more to MVD headquarters, whereupon he can start work in the shop to which he is assigned.

Security of Combine No. 172

24. The Security Service was commanded by a major of the MVD.

25. External security. The combine is surrounded by a triple barbed wire fence three meters high**. Every 100 meters there is a watch tower with a sentry and every 1,000 meters a higher wooden structure with a heavy machine gun and a searchlight. The river banks are also secured by barbed wire fences. At a distance of 50 m from the bank, there is a barrage of buoys to prevent the approach of any craft. At night, the fences are illuminated by searchlights. Outside the barbed wire fences, guards with dogs patrol day and night.

26. Security measures within the combine area. Every workman possesses a pass on which the exact approach and entrance which he must use is indicated. These passes show special marks, the meaning of which is known only to the guards. An attempt to enter through a gate other than the one specified may have serious consequences for the person concerned. When entering the works, these passes must be relinquished. They are replaced by a metal disk. No free circulation within the combine or between the various shops is possible. Contact between the shops is maintained by particularly reliable party members who hold special passes, but even these passes only authorize access to specified shops. These liaison men must be accompanied by an MVD soldier when entering the shops numbered 6, 7, 8, 10, 11, 12, and 18 of the Metallurgical Section. The same rule applies to works No. 3, 5, 10/I, 10/II, and 11 of the Mechanical Section. When persons enter these latter works, passes are issued for a single visit only.

27. Special section. This section is in charge of all constructional drawings, parts of which are issued only to individual workshops as required by them. All objects in manufacture are designated with a code name. The constructional drawings are distributed so that only a few engineers or foremen can tell the purpose of specific components.

28. Technical control. Representatives of the military authorities assigned to every workshop constitute a technical control section (OTK), which is subordinated administratively to the Directorate, but insofar as its duties are concerned is subordinated to the Department of Technical Control of the Armament Industry under the Ministry of Armament Production. On leaving the workshops, products must bear the marks of the controllers. The OTK passes the output to the Voyenpedn (sic), which may refuse acceptance. The military controllers are usually drawn from among artillery and tank specialists. Their chief in 1944 was a colonel of the Technical Department of Artillery. The output may leave the combine only if covered by a written certificate signed by the latter.

29. Mobilization section. This section is directly subordinated to the Ministry of Armament Production. It has at its disposal within the combine specially protected stores depots and facilities and separate reserves of coke. A certain portion of the output is stored in the depots of this section.

50X1-HUM

[redacted] Comment: This gun probably corresponds to the "42" Schneider-Creusot gun which was in use during World War I.

50X1-HUM

[redacted] Comment: Previously reported [redacted] as being surrounded by straight stone walls.

50X1-HUM

50X1-HUM

Next 2 Page(s) In Document Denied