

INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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COUNTRY USSR (Ukrainian SSR and Rostov Oblast)

REPORT

SUBJECT Industrial Plants in Dnepropetrovsk and Rostov

DATE DISTR. 18 February 1959

NO. PAGES 1

REFERENCES

DATE OF INFO.

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PLACE & DATE ACQ.

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SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

Attachment 1 describes the plant layout and details concerning production at the Dnepropetrovsk gas plant. Attachment 2 includes information on the buildings, production, security, personnel and related subjects at the Krasnyy Aksay Cultivating Machine Plant in Rostov.

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ENCLOSURE ATTACHED  
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COUNTRY: USSR

SUBJECT: *Krasny - Aksay*  
~~Krasny - Aksay~~ Cultivating Machinery Plant in Rostov.

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A. IDENTIFICATION AND LOCATION OF THE PLANT.

1. The cultivating machinery plant was known as Krasny-  
Aksay. [redacted] 25X1

It was under

the supervision of the Ministry of Heavy Industry.

Located in ~~the~~ Proletarskiy Rayon, the plant did not

have a street address for a number. It pertained to

~~the~~ Rostov <sup>Oblast</sup> region. There were no railroad lines nor

highways near the plant. ~~the~~ Street car line No. 3

ran from Rostov to within 400 meters of the plant.

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**B. Description of the Plant.**

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2. The plant consisted of 11 buildings constructed during the Tsarist period. It was surrounded by a wooden fence three meters high

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There was one entrance. It had no recently constructed buildings

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**C. Description and Use of Each Building.**

1. The plant buildings, in general, had the following characteristics: They were rectangular, one-story, concrete and brick structures, with metal roofs, and no basements.

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2. Building No. 1, the <sup>guard</sup> ~~garage~~house, <sup>where</sup> in which two guards controlled the entrance and exit of plant personnel.

The guards wore blue uniforms and were armed with rifles. They inspected the identification cards of all plant personnel. There were eight guards altogether.

3. Building No. 2, the garage, <sup>with dimensions</sup> was 10m x 8m x 6m. In the garage were five or six  <sup>Soviet-made</sup> Russian-made trucks for transporting machinery from the plant and for distribution of materials inside the area.

4. Building No. 3, the plant clinic, was for emergency treatment of plant personnel and had no surgical equipment. There were two doctors and three practitioners in the clinic.

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5. Building No. 4, the warehouse, ~~was~~<sup>used</sup> for storing gloves, all kinds of cleaning equipment, and oil for greasing machinery.

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6. Building No. 5, the office, ~~had~~<sup>with</sup> two floors, both used for the plant offices. On the first floor were the offices of personnel in charge of production. On the second floor were located the offices of the director, engineers, technicians, designers, and planners.

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7. Building No. 6, the tool shop, manufactured/turning-tools, die-plates, and drills for use within the plant.

8. Building No. 7, the restaurant, built to reduce loss of time and to avoid employees' commuting to the city. It was attended by ten women.

9. Building No. 8, the forging shop, ~~had~~<sup>with</sup> a metal roof ~~and~~<sup>with</sup> glass skylights. The shop constructed wheels and gears and prepared parts for the cultivators.

10. Building No. 10, the milling shop, ~~had~~<sup>with</sup> a roof constructed of iron grill-work ~~with~~<sup>for</sup> skylights. The dimensions of the shop were 125m x 45m x 6m. In the shop the sheet iron was shaped into ovals and burred for the construction of harrow teeth, known as lapy (claws). Three different kinds of lapy were produced and designated numerically 10, 12, & 13.

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The lapy were used for various kinds of cultivation, but were mainly employed in potato fields. The shop had the following machinery: eight large milling machines

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\*The nature of the information is smaller packing - H.K. smaller (smaller) - I.I.)  
Building No. 9, the packing department, where the harrowing machine parts were packed in wooden crates for shipment.

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[redacted] with dimensions 2m x 0,5m; 25X1  
 two presses known as press with dimensions 3m x 0.5m  
 and with a capacity of 30 MT. A total of 150 employees  
 worked in the shop. They manufactured 1,000 to 1,100  
lapy in an eight-hour shift. There was no margin of  
 error.

12. Building No. 11, the paint shop, where the lapy were  
 varnished blue and black in two metallic containers,  
 the dimensions of which were unknown [redacted] 25X1

D. Products:

1. Cultivating machinery with the trademark Krasnyy-Aksay.
2. There was no department for the repair or construction  
 of military equipment.

E. Raw materials:

1. Sheet iron, bronze, and steel; wood for packing; coal  
 in small quantities for the forging shop; and oil for  
 greasing machinery.
2. The plant was not dependent upon raw materials imported  
 from abroad. [redacted] 25X1

[redacted] it was ~~that it was~~ trans-  
 ported by barge down the Don River, which was 500m  
 from the plant. [redacted] 25X1

F. Water Supply.

1. There were no water tanks or pumps for supplying  
 water to the plant. [redacted] it was 25X1  
 piped from the Don River.

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G. Power Supply.

1. An electric power plant in Rostov supplied power to  
 the plant. [redacted] the supply was 25X1  
 adequate, as there was never a power shortage in

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5. 25X1

[redacted]  
the plant [redacted]

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H. Packing.

1. Wooden cases with dimensions 1m x 0.3m x 0.3m and others of 1/2m<sup>3</sup> were used for ~~the transportation of~~ <sup>packing</sup> the machinery. On the outside of all the crates was marked Krasnyy-Aksay. During the packing process, a woman was in charge of supervising the number of parts for each crate. Two other women made sure that the orders and shipments were complete and notified the attendant in charge of the respective division if there was a shortage or excess of parts needed to complete the shipment.

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I. Transportation.

- \* from Para. 11  
- Packing depot.
1. The transport of the shipments was in trucks owned by the plant [redacted]. The trucks left the plant by a road in the direction of Rostov. All the vehicles used were light trucks of three MT. and some of 1.5 MT.

J. Production System.

1. The sheet iron was brought into the plant on hand trucks and was taken to the milling shop. The surface of the sheets was then reduced to a minimum dimension which varied from three to seven mm. From the milling shop the sheets were taken directly to the presses, where they were cut to the appropriate measurements and given an oval shape.
- [redacted] the production of machinery [redacted] was for land cultivation, mainly the cultivation of potatoes.

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K. Plant Production Data.

1. The average production during 24 hours approximated

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150 cultivators. [redacted]

I. Working Conditions.

1. There were three work shifts of eight hours each.

The number of workers in each shift in the milling shop [redacted] was 40 to 45. [redacted]

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[redacted] The number of working hours each week was not more than 50 and not less than 48.

During the summer the workers were given 12 to 15 days' vacation, depending on length of service in the plant.

2. The monthly salary varied from 700 to 1,100 rubles.

[redacted] 25X1

3. There was only one emergency clinic at the plant.

Workers in need of hospitalization were transferred to a sanatorium in Rostov.

M. Plant Security.

1. Within the plant there were no security precautions.

Four or five guards were situated at each end of the plant and maintained a constant watch of the perimeter. For each shift there were five or six guards, two at the control gate and four dispersed around the plant. They were armed with rifles. There were 20 guards in all, who were plant employees and wore blue uniforms.

2. A propusk, an identification card with the photograph and number of the employee, was necessary in order to enter the plant. There was only one general entrance for all plant personnel. They had to show the propusk both on entering and leaving the plant. Access to shops in the installation, other than the worker's own, was not permitted.

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[redacted] 25X1



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3. For each work shift, two firemen were sent to the plant from the Rostov fire department. New personnel were instructed in fire prevention. No precautions were taken against aerial attacks.

N. Organization and Personnel.

1. All the chief engineers of the different divisions and the plant director had their offices in Building No. 5 which was the head office. The general report on work norms was sent to this office. Wages were paid every 15 days through the head office. 25X1

2. [redacted] the organization of the milling shop, No. 10. There were about 150 persons working in three shifts. In each shift there were:

- 9 forgers
- 4 press operators
- 1 mastercraft
- 2 mechanics
- 3 office assistants
- 1 office manager
- 1 shop chief
- 1 assistant to the shop chief who was an agricultural machinery technician.
- 15 to 20 laborers for the shop services, such as carrying the materials to the shop and then taking the parts to Building No. 11 to be painted.

3.

[redacted] names of the following officials: 25X1

- a. Ivanov (fnu), the plant director [redacted]

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b. Panchileyev (fnu), assistant to the plant director and chief machinery technician. 25X1

[Redacted]

[Redacted]

c. Chernyshev (fnu), shop chief

[Redacted]

[Redacted]

d. Kládov (fnu), milling shop master

[Redacted]

[Redacted]

[Redacted]

4. There were no strikes nor did the workers complain about the wages or about the work. There was no class of workers with special privileges, <sup>and</sup> ~~There were~~ few absentees from work.

C. Deficiencies, Improvements, and Promotion of Production.

i.

1.

[Redacted]

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There was no shortage of materials nor any difficiency in the production. The norm was always reached.

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[Redacted]

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5. Building No. 4, the warehouse, ~~was~~<sup>used</sup> for storing gloves, all kinds of cleaning equipment, and oil for greasing machinery. [redacted]

25X1

6. Building No. 5, the office, ~~had~~ two floors, both used for the plant offices. On the first floor were the offices of personnel in charge of production. On the second floor were located the offices of the director, engineers, technicians, designers, and planners. [redacted]

25X1

7. Building No. 6, the tool shop, manufactured <sup>boring machines,</sup> turning tools, die-plates, and drills for use within the plant.

8. Building No. 7, the restaurant, built to reduce loss of time and to avoid employees' commuting to the city. It was attended by ten women.

9. Building No. 8, the forging shop, ~~had~~<sup>with</sup> a metal roof ~~and~~<sup>with</sup> glass skylights. The shop constructed wheels

for the cultivators. [redacted]

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with skylights. The

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shop the sheet iron was ~~shaped~~<sup>shaped</sup> into ovals and burred

for the construction of harrow teeth, known as 'lapy'

(claws). Three different kinds of lapy were produced 25X1

and designated numerically 10, 12, & 13. [redacted]

The lapy were used for 25X1

various kinds of cultivation, but were mainly employed

in potato fields. The shop had the following machinery:

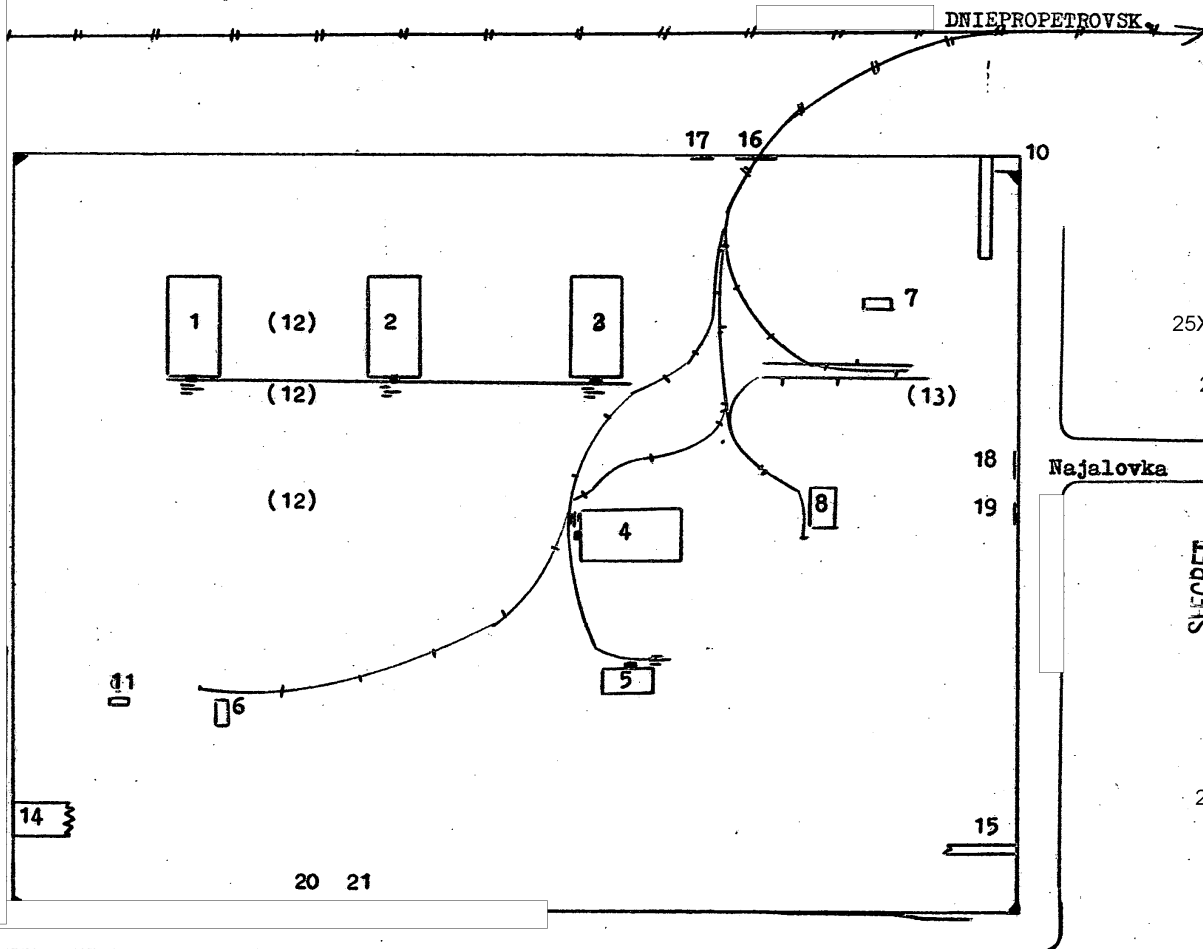
eight large milling machines, the characteristics of

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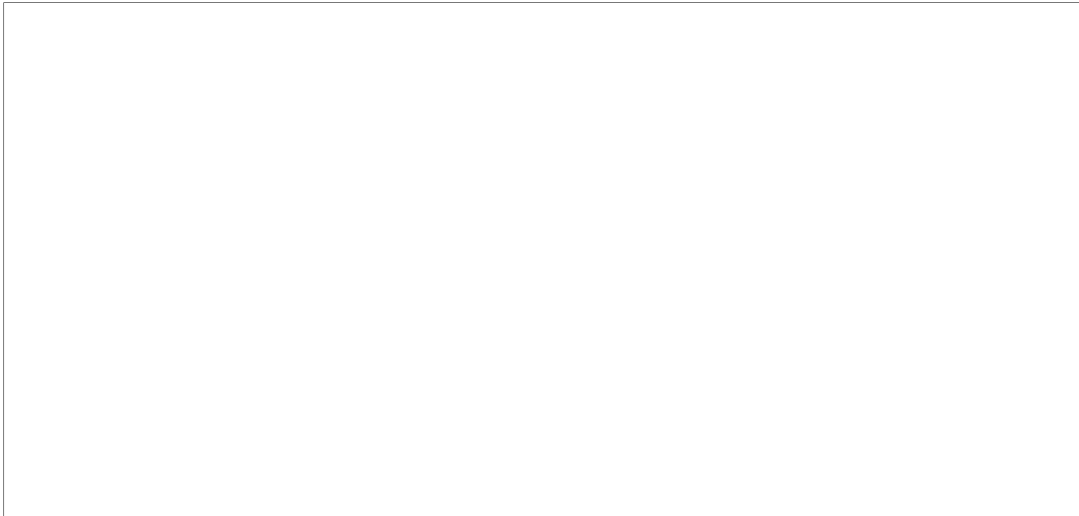
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Country USSR ( Dnepropetrovsk )

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Subject: DNEPROPETROWSK Gas Plant



A. Plant Identification

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Name of the plant: Dneprovskaya Gazovoy Zavod or the Dneprovskaya Gas Plant.

It was under the jurisdiction of the Ministry of Metallurgy.

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B. Plant Location

The plant is located in the city of Dnepropetrovsk on Belostotskaya Ulitsa ( no number given ), rayon Nizhniy Dneprovskiy, about 2 kilometers to the north of the Dnepr railroad bridge.

C. Description of the Plant:

( please see sketch attached to this report ). The plant is surrounded by a reinforced concrete wall 3 or 4 meters high topped off with aobarbo barbed wire .70 meters high. the wall has a total length of approximately 7,000 meters.

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D. Description of each building and its function:

This plant consisted of 5 buildings directed connected with gas production and a series of smaller buildings such as the machine shop, electrical shop , generator plant. garage. first aide station, dining hall and offices.

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1st Section:  
1. Building

4

This is a brick and concrete structure, ~~three~~ story high and with a gabled roof containing many sky lights, measuring 200 x 100 x 25 -30 meters. It did not have a cellar but it did have a number of underground passages which housed the end-less chain which fed the furnaces, the plant's plumbing and numerous air ducts ~~which brought~~ for the furnaces. the building fire-proof

25X1

~~Each boiler had a metal stack about 100 meters high.~~

25X1

Each <sup>furnace</sup> boiler had a metal stack about 100 meters high.

The plant had good ventilation for in addition to the sky-lights it had many windows. The poorest ventilated floor was the

3rd. 4th.

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2. The production of gas:

This plant produced an odorless and colorless gas used in industry and in homes. Some was bottled for domestic use, coke and coal in unspecified proportions were used to make gas.

The machinery is German and was brought to the Soviet Union from Germany after World War II. The plant itself was built by German POW.

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The plant equipment consisted of 6 boilers each with a diameter of 20 meters and a height of about 7.5. Coal or coke are burnt in these boilers to produce the gas. ( 6 )

There were six filters ( 7 ) which were called " Pilnik " which purified the gas with sprays of water. An additional six filters were on hand as reserves. The sprays of water removed the solid matter from the gas and also cooled it.

After leaving the filters the gas goes to a machine which does not look like a pump but has the same function. This machine forces the gas under pressure to various points. This machine ( with a spare on hand ) forces the gas to a railroad switch yard, and to the city.

In addition there are other machines such as the ten pumps for the water towers, 2 systems of endless chains which feed coke or coal to the boilers. One is a vertical system which brings the fuel to the level of the hoppers and the other travels horizontally and brings the fuel directly to the boilers.. There are six blowers which give the boilers forced draft. On the 2nd story there are four ventilator blower fans for each boiler. The plant is equipped with blowers set in the window to help circulate the air. All these fans are powered by electric motors especially designed to withstand heat and smoke.

On the 2nd and 3rd floors were control panels with instruments which determined gas density, pressure, temperature, volume etc. there was also a laboratory ( floor on which located was not specified ) which was well equipped.

25X1

25X1

3. Labor force:

The plant employed about 400 men working 6 shifts of 4 hours per shift.

The workers were equipped with felt boots and heat resisting gloves. They were forced to wear a kind of a gas mask.

Safety patrol :

Specially equipped and specially trained patrols looked after the safety of the workers. They wore felt boots and used pants and jackets made out of water-proof, heat resisting material and a gas mask. Several types of masks were used but the most common was one without a face. It had a mouth piece and a kind of a clip that went over the nose. Goggles protected the eyes. Oxygen bottles with a four hour capacity were carried on the back.





hauling cars weighing 15 tons. Generally about 12 cars made up the train. There were a number of cranes of unspecified capacity connected with the loading and unloading of coal.

The trains which brought the coal to the plant had no special schedule and remained just long enough at the plant to unload their cargo.

### Streets

The streets of the plant were black topped and operational the year round.

### 1. Stockpile

There was a coal pile which held a two days reserve of coal. There was also some acids which were used in the chemical analysis of the gas

The gas generator or boiler was made of steel with a thickness of about 25mm. The boiler had a water jacket approximately 300 mm thick to prevent over heating. The boiler was in the form of a open cylinder covered at the top on which there were nine openings into which steel rods were placed and used to stir the coke in the interior of the boiler. Each rod had a knob in the shape of an artichoke which directed steam downwards. Besides these openings there was a metal stack through which the smoke came when the boiler was lighted. The boiler was supported by four, reinforced concrete columns and decorated with a band of glazed bricks.

Under each boiler was a water trap to prevent the escape of gas. There was also a mechanical device consisting of two rotating blades within the boiler which broke up the clinkers and aided the circulation and draft.

About 2 or 3 cubic meters of kindling was necessary to light the boiler. This kindling was soaked with about 30 litres of kerosene, and ignited. When it was burning properly, more coal was put on until the proper level had been reached, and a temperature of some 1,200 degrees indicated. Then an analysis of the gas is made and if found to contain the right proportions (0.80 % oxygen) the draft and the top are closed and the conduit which takes the gas to the filter point is opened. (7) This filter is called "Pilnik" and it is here that the gas is washed in sprays of water, removing the solid matter from it such as dust and carbon and at the same time cooling it. From here it passes to a purifying machine called "GAZDUVKA" which has many dials and is very large in size. It removes the undesirable gases and then forces the gas through the outlet system. While the gas passed from the boiler to the filter point it was subjected to a blast of steam, within the gas conduits, which affected the oxygen content of the gas.

Plants no. 1, 2, and 3 had gas lines going to the Railroad switching house.

Plant no. 4 and 5 had two outlets: one went to the main plant and the other to Dnepropetrovsk.

The gas conduits leaving the plant were about 1.5 meters underground. In order to maintain the outgoing gas at an optimum temperature, the gas conduit was wound with a flexible steam pipe.

The gas conduit had an inside diameter of about 1.5 meters and its total length, was about 600 meters. This was the conduit between plant no 4 and 5 and the main plant. The gas conduit going to the city was about 40 to 50 CM in diameter and of unspecified length. This main gas line was protected by a concrete and brick covering which help

to maintain the proper temperature, protected the steel from humidity and made repairs easier.

### Plant security :

In addition to the usual 2 or three guards at each entrance to the plant there were outside guards as well. The plant ~~was~~ was well illuminated by floodlights at night. The exterior guards used dogs whose leashes were tied to a cable by a ring, permitting the dogs to cover a large area. [redacted] about 50 guards made up the security guard. 25X1

The workers had the usual " propusk " as identification. The color of this card was changed every year. Besides this pass each worker had a metal disk with a number. Upon entering the plant, this metal disk was left with the guard and the workmen picked up their metal disks upon leaving the plant. Each man entered and left the plant through a prescribed door. Workers could circulate from one section to another but they were kept too busy to do so.

The fire fighting crew consisted about 100 men divided into six shifts. They had 3 fire rucks and 1 hook and ladder truck besides the usual fire fighting equipment such as axes, crow bars etc. The fire fighting crew was assisted by the safety patrol and the workers themselves who were trained to fight fires.

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### Personnel

The plant's personnel consisted of the following:

- { Plant manager: chemical engineer
  - { Assistant plant manager, chemical engineer
  - { Chief chemical engineer and his staff consisting of:
    - { Assistant chemical engineer
    - { Mechanical engineer
    - { Engineer ( function not specified )
    - { Chemical engineer, head of the central laboratory
    - { Chief mechanic, head of the maintenance section
  - { Part secretary
  - { Secretary of the Komsomol
  - { Presidente of the Labor Union local
  - { Director of personnel
- Security chief



<sup>at</sup> The office of economic service  
was allotted money each year by  
the govt to repair & maintain  
the railroads. The prices of  
nickel, zinc, duraluminum,  
silver, lead & copper are given.