

INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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COUNTRY Poland

REPORT

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SUBJECT 1. Description of the LOT Plant at Okecie Airfield in Warsaw  
2. Miscellaneous Observations at Okecie Airfield

DATE DISTR.

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REFERENCES

DATE OF INFO. PLACE & DATE ACQ.

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1. The accompanying sketch shows the location of the buildings comprising the Polskie Linie Lotnicze (LOT) Plant at Okecie Airfield (Nos. 6-18 on sketch); and the locations of other buildings and/or areas on the field, which are mentioned below. Information about the plant and description of some of its components and functions are included.

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2. The LOT Plant at Okecie Airfield formed an independent section under LOT. At the plant, LI-2 (CAB), IL-14 (GRATE), IL-18 (COOT) military transport and VIS-COUNTS are given periodic overhauls and/or maintenance. Airplanes belonging to LOT and to the Polish Army, LI-2's and IL-14's, and their engines, designated ACH-62 and ACH-82 respectively, are given extensive overhauls. Plans were underway to expand the plant in 1964 to handle the repair of Pratt engines. Approximately 400 men were employed in the plant in mid-1963.

3. Sections of the plant are designated as follows:

TRP: Technological section and engineers' offices (administration building) (No. 15 on sketch).

T-1: Workshop for overhaul and maintenance of aircraft (No. 8 on sketch).

T-2: Workshop for complete overhaul of aircraft (No. 6 on sketch).

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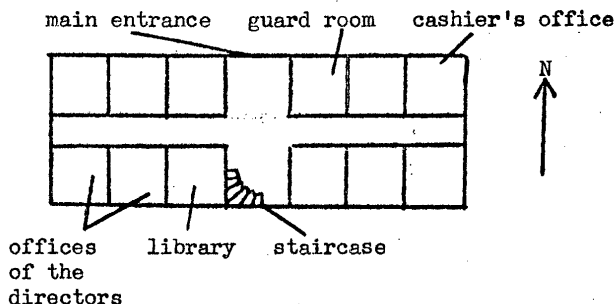
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T-3: Workshop for engine repair and testing building (Nos. 14 and 17 on sketch).

T-4: Workshop for overhaul and repair of aircraft instruments (No. 8 on sketch)

N-E: Unknown.

4. The plant had its own administration department, which was located in the administration building (No. 15 on sketch). In mid-1963 this department had two managing directors--an administrative director and a technical director--both of whom had their offices on the first floor of the administration building.
5. The administration building was white, and was three stories high. A guard room, offices of supervisory personnel, a cashier's office, and a library were located on the first floor. The second floor contained offices for engineers, and possibly a drafting room; and the third floor, a technical section, a purchasing office, and a stock room for spare parts. A ground plan of the building appears below.



6. In the engine repair workshop (No. 14 on sketch) the ACH-62 and ACH-82 engines were given complete overhauls. The machinery in the workshop was small and much of it was worn out. As a result many of the work processes in the shop were carried out with simple hand tools. Machinery in the shop included an American hote machine for hydraulic cylinders (the workshop's only machine of Western origin); a cylinder hote machine for engine cylinders (East German); an exhaust system in the paint shop; and a sandblast machine. Good care was given the American hote machine, which was not the case with machines of East German and Soviet origin. The East German hote machine gave the workers a lot of trouble. The exhaust system and the sandblast machine, which had been designed and built by the plant, were often defective.
7. The engine repair workshop had a sectional manager, under whom there was a foreman, whose job it was to coordinate the individual workshop units. The shop occupied a modern building, with large windows and an excellent air-conditioning system. Within the building there was also a supply depot, containing 20 or 30 ACH-82 and about 10 ACH-62 engines, some of which were new, others repaired, and some defective. A sketch of the shop appears on page 3.
8. The testing building (No. 17 on sketch) contained two testing stands for piston engines, and a traveling crane.<sup>1</sup> Normally engines, including ACH-62 and ACH-82, were tested each day. Sketches of the testing building and the heating system under the control room of the building appear on page 3.
9. During the unusually hot summer of 1963 in Warsaw there often was trouble with the cooling of the engines. Several times plant workers tried to replace the fixed oil coolers on the testing stands. This did not work and testing had to be made at night. During the winter, on the other hand, the cooling air for the engines must be heated. This was accomplished by closing the grates (1) and leading the air through the floor grates (2) and through a basement channel, where the air is being heated.

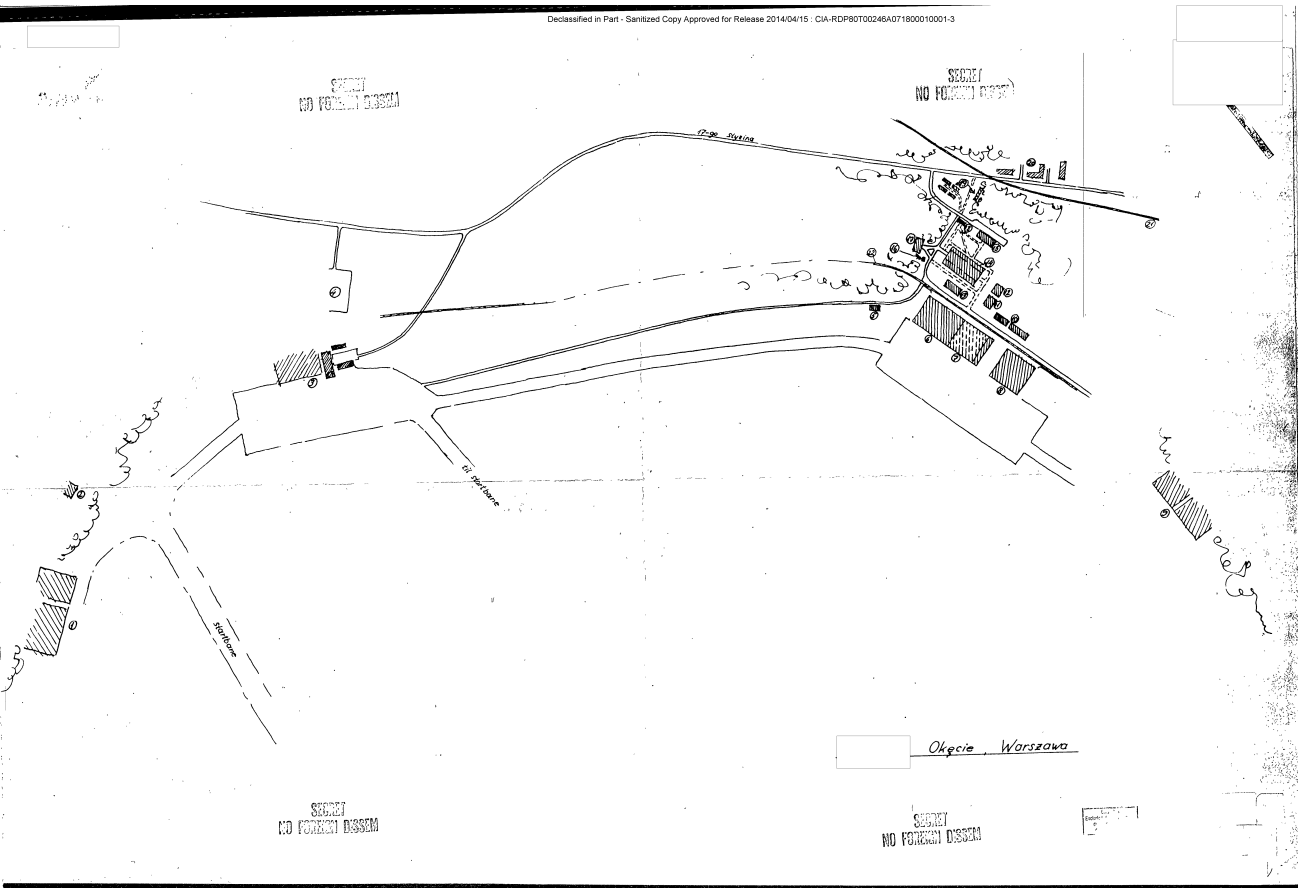
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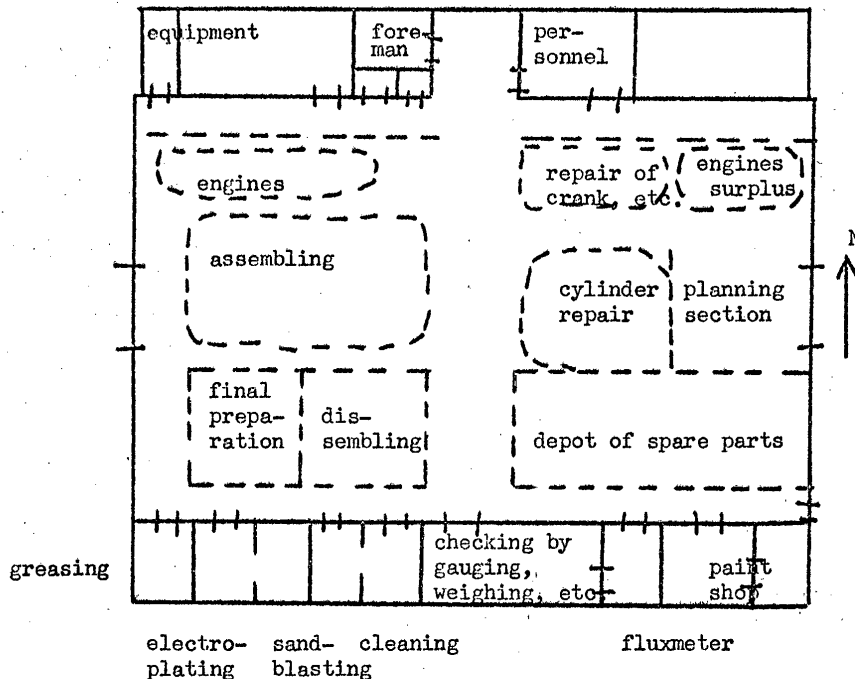
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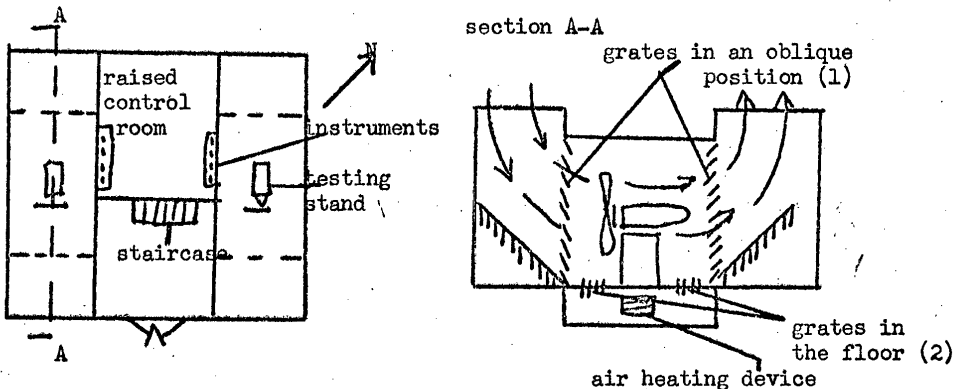
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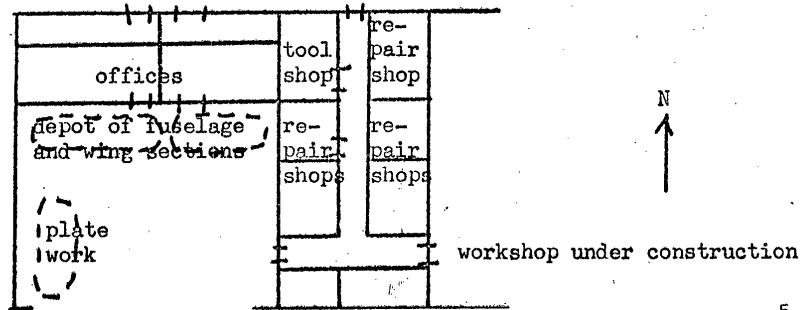
Sketch of engine repair workshop



Sketches of testing building



10. The workshop in which aircraft were overhauled (No. 6 on sketch) contained a hangar, which could accommodate two planes, and a depot containing fuselage and wing sections. A sketch of the building appears below.



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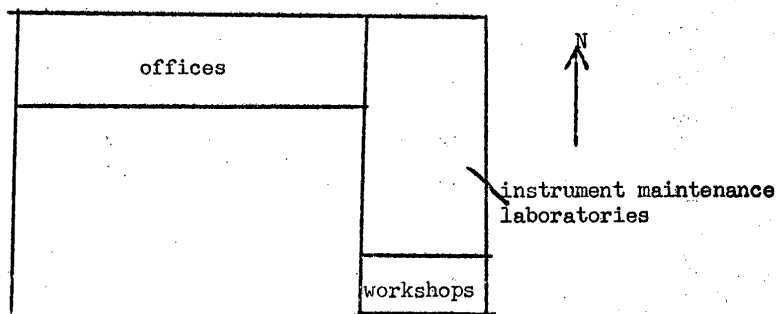
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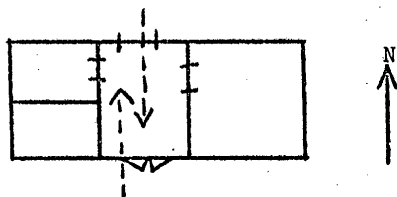
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11. The workshop for overhaul and maintenance of aircraft (No. 8 on sketch) contained workshops for aircraft maintenance, instrument maintenance laboratories, offices, and a hangar, which could accommodate two or three aircraft. Instruments were mainly tested in the instrument maintenance laboratories--no actual repairs were made here. The testing instruments were either of Polish or Soviet origin. A sketch of the building appears below.



12. The guard building (No. 18 on sketch) was used by all guard personnel, responsible for the area around the plant.<sup>3</sup> These guards patrolled the entire area with the exception of the spaces between buildings day and night. They were armed and often challenged persons passing between buildings demanding their identification. Military guards were posted at all military aircraft. A sketch of the guard building appears below.



13. A workshop under construction (No. 7 on sketch) contained some offices for engineers. Construction of the roof was underway in the summer of 1963.

14. Other buildings at Okecie Airfield are:

- Two or three hangars (No. 9 on sketch). IL-14 (CRATE) were seen permanently within the area.<sup>4</sup>
- A factory in which sports and jet trainers were produced (No. 1 on sketch). The trainer was bulky and short, and took off on a short stretch. On several occasions, MIG jets were pulled out from one of the buildings comprising the factory.
- A fire station (No. 5 on sketch), which contained garages for two or three fire engines.

15. Following is a description of the steps involved in complete overhaul of aircraft:

- The engine is placed on the testing stand, where it remains for about five hours. During this time the oil pressure, gasoline pressure, charging, ignition, and temperatures at various speeds are checked. Oil filters are removed and examined for metal particles, and during the last three hours of the testing, gasoline and oil consumption, propeller functions, regulator and starter are being checked.

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2. Cylinders are cleaned--by sandblasting--on the outside, and the inner parts with petroleum and soapy water.
3. All parts are gauged and weighed.
4. Heavily loaded parts, such as crankshafts, connecting rods, pinions, and axles are tested with fluxmeters. Parts of light metal, for example the crankcase, are tested for color absorption ("the yellow-red method").
5. Various repairs, such as grinding, replacement of other linings, painting, chromium-plating.
6. During and after the assembling all bolts are secured with wire.
7. The engine is re-tested almost as is explained in point 1. The filters are especially examined.

The cylinders corresponding to the main connecting rods, the injection pump, and the packings between the accessories and the engine were especially exposed and weak parts. The spare parts mainly came from East Germany. Previously many spare parts came from the USSR. New engines came from Czechoslovakia.

16. The technical data on the ACH-82 engine, cited below, was taken from a manual issued in Karl-Marx-Stadt in 1961:

The engine has 14 cylinders, arranged in two circles, and the fuel is injected directly into the cylinders. The system includes a fuel feed pump, injection pump, and nozzle. The fuel feed pump also pumps gasoline into an injection nozzle in the throttle house (this system is only used at take-off). The engine also has two magnets and distributors (high tension ignition system). Regulation of number of revolutions takes place by a regulator, placed over the reduction gear. The regulator receives oil from the foremost oil pump, which delivers a higher oil pressure than the rear pump. Otherwise the make-up of the engine corresponds to the Pratt engine (double wasp). Its maximum number of revolutions are 2700 revolutions a minute. At take-off the engine may turn 2600 times a minute in maximum 30 seconds, but it usually turns only 2500 times a minute. At 2600 revolutions a minute 1900 horse power is developed. A new engine can run 500 hours before needing a complete overhaul. It can then run 400 hours between each succeeding overhaul. Absolute maximum running time is 2500 hours.

Comments.

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1. Two traveling cranes were needed.
2. The Pratt engine possibly also was tested.
3. There probably were 20 men or more in the area.
4. The buildings probably were reserved for IL-14 military transports. Only a few workers appeared to be working in the buildings.

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Key to attached sketch

1. Military section for MIG jets.
2. Possibly a test building.
3. Civilian airport buildings.
4. Parking lot for tank trucks.
5. Fire station.
6. Workshops for overhauling aircraft.
7. Workshops, a hangar under construction, and offices.
8. Aircraft maintenance and instrument maintenance laboratories.
9. Hangars for military IL-14 transports.
10. Depot buildings.
11. Power plant.
12. Basin for cooling water.
13. Depot (?).
14. Repair and maintenance for piston engines ACH-62 and ACH-82.
15. Administration building.
16. Small building (probably connected with the tank installation for testing stand No. 17.
17. Testing building.
18. Guard center and main entrance.
19. Workers' residence and canteen.
20. Residences and shops.
21. Single-track railway (extensive freight traffic was seen only).
22. Single-track railway (used for transporting supplies to the workshops and the new construction areas.)

Distribution of Attachment (3 copies of 1 sketch):



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