



**BASIC IMAGERY
INTERPRETATION
REPORT**

NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER

**MOSCOW AIRCRAFT EXPERIMENTAL
PLANT TsAGI 156**



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STRATEGIC WEAPONS INDUSTRIAL FACILITIES

USSR

MARCH 1972

Reviewed by NGA.

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INSTALLATION OR ACTIVITY NAME	COUNTRY
Moskva Aircraft Experimental Plant TsAGI 156	UR

UTM COORDINATES	GEOGRAPHIC COORDINATES
NA	55-45-45N 037-40-45E

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MAP REFERENCE

SAC. USATC, Series 200, Sheet 0167-5, scale 1:200,000

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NEGATION DATE (if required):
NA

ABSTRACT

1. Moscow Aircraft Experimental Plant TsAGI 156 has a twofold function. It contains that portion of the Soviet Central Aerohydrodynamic Institute which is responsible for research in industrial aerodynamics and hydrodynamics in the USSR. It also contains the A.N. Tupolev experimental design bureau and its affiliated Aircraft Experimental Plant 156. The Tupolev design bureau is responsible for the design and development of the Soviet TU-series of aircraft. The plant, which dates back to World War II, has 43 major structures and contains a total floorspace of [] square meters [] square feet).

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2. This report contains a location map; an annotated photograph; and a table identifying the function, dimensions, and construction chronology of all major structures in the plant.

INTRODUCTION

3. The Central Aerohydrodynamic Institute (TsAGI) is the principal Soviet organization for design-oriented applied research in aerodynamics. ¹ It consists of two separate and distinct installations--Moscow Aircraft Experimental Plant TsAGI 156, located 2.4 nautical miles (nm) east of the Kremlin, and Ramenskoye Central Aerohydrodynamic Institute (TsAGI) [] located 26 nm southeast of the center of Moscow (Figure 1). This report concerns only Moscow Plant TsAGI 156.

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4. TsAGI 156, founded in 1918, originally was responsible for all aspects of the institute's research programs. ¹ During the mid-1940s the TsAGI installation at Ramenskoye was constructed. Subsequently the responsibility for aerospace-related research and aircraft aerodynamic and structural testing was reportedly transferred from TsAGI 156 to the facility at Ramenskoye, often referred to as new TsAGI.

5. The TsAGI 156 complex covers three city blocks and is divided by Radio Ulitsa (street) (Figure 2). To the north is the original TsAGI facility, often referred to as old TsAGI and designated area A in this report. South of Radio Ulitsa are the experimental design bureau (OKB) of A.N. Tupolev and the OKB-affiliated experimental Plant 156, ² designated area B for the purposes of this report.

6. TsAGI 156 reportedly is now responsible for research in industrial and municipal aerodynamics.¹ This includes research in the development of blowers and fans, design of ventilation systems, and study of compressors and turbo machinery. It is also responsible for the research in aerodynamics relating to hovercraft and hydrofoil hydrodynamics. ¹

7. The Tupolev OKB at TsAGI 156 is responsible for the design and development of the Soviet TU-series of aircraft. ² Although there has been no photographic evidence of aircraft or aircraft parts within the plant area, prototype aircraft and engineering changes on production aircraft are reportedly designed and fabricated at the plant. ³ These aircraft are then partially disassembled and transported to Ramenskoye Flight Test Center (BE [] about 20 nm southeast of the Kremlin, for actual flight testing. The Tupolev OKB has facilities at the test center for direct support of Tupolev flight test activities.

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BASIC DESCRIPTION

8. Moscow Aircraft Experimental Plant TsAGI 156 encompasses 53 acres and contains 43 major structures. The total floorspace is [redacted]

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9. Area A, old TsAGI, is located on the north side of Radio Ulitsa and covers a city block (Figure 2). This area contains aerodynamics laboratories, wind tunnels, and a towing basin. The wind tunnels located in two laboratory buildings (items 42 and 43, Figure 2) were present prior to the mid-1930s. The towing basin (item 39), designed by A.N. Tupolev, consists of a tank approximately 198 meters (650 feet) long, [redacted]

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[redacted] The towing basin has been used in testing air cushion and hydrofoil vehicles and for research in the hydrodynamics of hydrofoils.

10. Area B extends from the south side of Radio Ulitsa to the banks of the Yauza River, fronting on Saltykovskaya Nab (street) (Figure 2). This area, which encompasses two city blocks, contains the A.N. Tupolev OKB and OKB experimental fabrication Plant

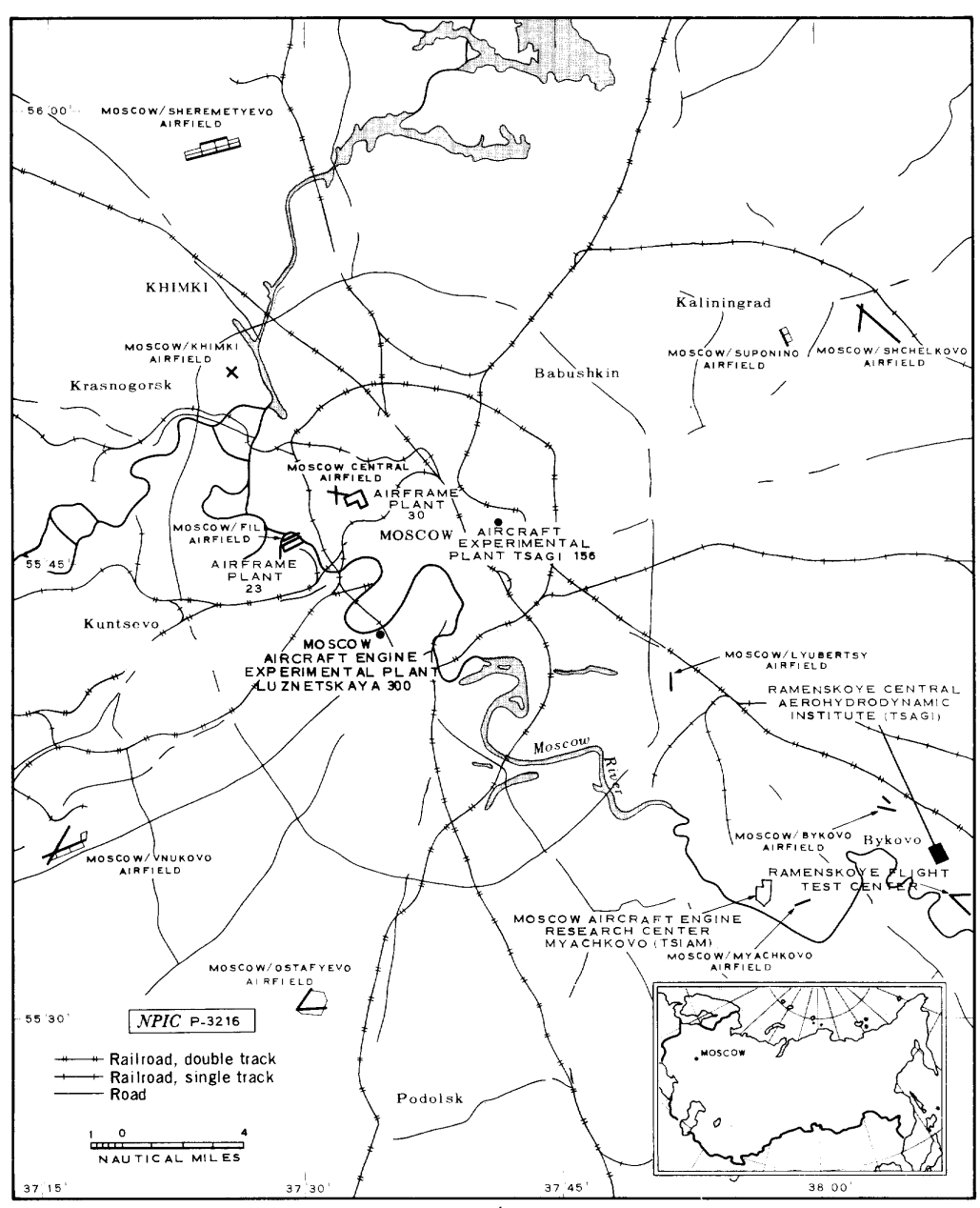
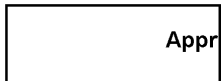


FIGURE 1. LOCATION MAP

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156.2 The principal buildings associated with the OKB are two multistory administration/engineering buildings (items 13 and 19). Section 13a is a single-story structure [redacted] This section is probably used for prototype static testing and structural testing of production aircraft. The principal buildings of the fabrication plant are two large assembly/engineering buildings (items 15 and 18) and six shop buildings (items 12, 17, and 21-24).

11. The tabulation below presents the functional distribution of floorspace in Moscow Aircraft Experimental Plant TsAGI 156, by area.

Functional Description

Area A (Old TsAGI)

- Lab bldgs
- Admin/lab bldgs
- Shop bldgs
- Support bldgs

Area B (Tupolev OKB and Affiliated Experimental Plant)

- Admin bldgs
- Admin/engineering bldgs
- Assembly/shop and engineering bldgs
- Shop bldgs
- Warehouse/storage bldgs
- Support bldgs

Total, Areas A and B

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Chronology

12. When Moscow Aircraft Experimental Plant TsAGI 156 was first seen on German photography of July 1941, both areas A and B were probably operational. All of the major buildings in area A were complete, and over 70 percent of the major buildings in area B were in place. There has been no significant construction in area A since 1941. During the next two decades no usable photographic coverage of the plant was obtained. When the plant was seen on satellite photography [redacted] the most significant new construction noted in area B was a seven-story engineering section that had been added to an assembly/engineering building (item 15).

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13. Between 1963 and 1967, several small buildings were razed in area B to make way for new construction. The major additions during this period were an administration building (item 1), a shop building (item 24), and completion of the OKB administration/engineering buildings (items 13 and 19).

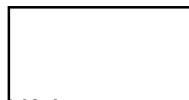
14. In 1968, construction started on a new assembly/engineering building (item 18), which was complete [redacted] This building added [redacted] (square feet) of floorspace to the plant.

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Essential Services

15. The TsAGI 156 complex is served by good paved urban roads, wide enough to handle large vehicles and materials. Rail service is available within a mile of the plant. Basic utility services, such as water and electrical power, are available from metropolitan sources.



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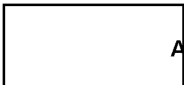
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Security

16. The buildings in area A are aligned along the sidewalk around the entire block, with masonry/iron fences securing open areas. Some of these buildings have entrances facing the streets; these entrances are probably monitored by security guards inside the buildings. There are two vehicular/pedestrian gateways to Radio Ulitsa on the south side and one gate to Novokirochniy Pereulok (street) on the north side (Figure 2).

17. There are three gate entrances to area B. Two of the gates are on Saltykovskaya Nab. This street extends along the south and east sides of the installation. The third gate is on Radio Ulitsa on the north side. Area B also has buildings with entrances facing the street. A masonry/iron fence extends between the outer building and secures the balance of the perimeter of area B. No special security measures such as guard towers or multiple fencing were discernible in either area.

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REFERENCES



MAPS OR CHARTS

SAC. US Air Target Chart, Series 200, Sheet 0167-5, scale 1:200,000

DOCUMENTS

- 1. USAF. FTD, T68-86540, PHS-126-68-1, *Activities of the Central Aerohydrodynamics Institute imeni N. Ye. Zhukovskiy (TsAGI)*, Jun 69 (SECRET [redacted])
- 2. DOD. [redacted] *Tupolev Design Bureau*, 30 Nov 70 (CONFIDENTIAL [redacted])
- 3. USAF. FTD, CW-09-03-72, *CHARGER (TU-144) Supersonic Transport*, 15 Dec 71 (SECRET [redacted])

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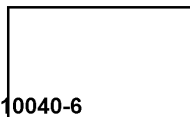
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REQUIREMENT

COMIREX J02
NPIC/IEG/SD/SIB Project 222380

[redacted] is the latest photography of this installation.

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