



Title: CENTRAL SCIENTIFIC RESEARCH INSTITUTE OF <sup>AIRCRAFT</sup> ~~AVIATION~~ ENGINE  
BUILDING imeni P. I. BARANOV USSR

Source: Nauchno-Issledovatel'skiye Instituty Tyazhelyy Promyshlennosti



50X1-HUM

**CONFIDENTIAL**

**CONFIDENTIAL**

**CENTRAL SCIENTIFIC RESEARCH INSTITUTE OF  
AIRCRAFT  
AVIATION ENGINE BUILDING imeni P. I. BARANOV**

**(TsIAM)**



50X1-HUM

**Location:**

2 Aviamotornaya Ulitsa, Moscow 20

**Telephone:**

Ye-1-11-133 and Ye-1-18-36.

TsIAM is subordinate to the Main Administration of the Aviation Industry, People's Commissariat of Heavy Industries (GUAP, NKTP).

**Chief of Institute:**

Mechanical Engineer K. N. Belyayevskiy

TsIAM conducts scientific research work and experimental work in the field of airplane engines and the operation of engines, and undertakes the design and construction of new types of airplane engines and airplane accessories.

**Scientific Sectors and Laboratories:**

Laboratory for Engines Operating on Light Fuels

Laboratory for Engines Operating on Heavy Fuels (Aircraft Diesels)

**Division for Testing Engines under Actual Flight Conditions:**

Altitude Laboratory for Testing Engine Performance under Simulated

High Altitude Conditions

Fuel and Lubricants Laboratory

Special Equipment Laboratory

**Division for Testing Materials:**

Chemical Laboratory

Mechanical Laboratory

**CONFIDENTIAL**

**CONFIDENTIAL**

Plastics Laboratory

Metallographic Laboratory

**Leading Scientific Personnel:**

Engineer V. N. Belikov - testing engines

Engineer A. D. Grachev - airplane engine <sup>designer</sup> constructor

Engineer N. I. Vorogushin - theory of the airplane engine

Engineer V. V. Demidov - new materials and new technological processes

Engineer V. I. Dmitriyevskiy - superchargers

Engineer V. A. Dobrynin - airplane engine <sup>designer</sup> constructor

Engineer S. A. Yevseyev - engine testing

Engineer N. A. Kalashnikov - new materials

Engineer V. R. Kirsanov - carburation and fuel-feed for airplane engines

Engineer P. M. Kozlov - new materials

Engineer D. Ya. Kolomatskiy - aviation gasoline and aviation lubricants

Engineer A. S. Kupriyanov - experimental production

Engineer I. Ya. Iysenko - airplane propeller construction

Engineer A. S. Lugas'kov - light alloys

Engineer M. M. Maslennikov - heat processes in airplane engines

Engineer A. A. Mikulin - Chief <sup>Designer</sup> Constructor for Gasoline Airplane Engines; designer of the M-34 engine and several others. Holder of the Order of the Red Star

Engineer K. V. Minkner - Propeller and Engine Group and studies of engine performance at high altitudes.

Engineer N. M. Mikhaylov - special equipment

Engineer I. Sh. Neyman - computations on airplane engines

Engineer N. V. Okromeshko - new materials and new technological processes

-2-

**CONFIDENTIAL**

**CONFIDENTIAL**

Engineer A. S. Orlin - exhaust in two-cycle engines  
 Engineer A. A. Rosenfel'd - engine testing  
 Engineer D. N. Rudin - airplane engine construction  
 Engineer N. P. Serdyukov - airplane engine construction  
 Engineer L. S. Tatko - airplane engine testing  
 Engineer Ye. V. Urmin - airplane engine construction  
 Engineer L. Ye. Pomin - airplane engine construction  
 Engineer M. A. Khaylov - operating characteristics of engines  
 Engineer A. D. Charomskiy - construction of aircraft Diesels  
 Engineer M. V. Sharov - casting of light alloys  
 Engineer L. G. Sheremet'yev - airplane engine cooling  
 Engineer A. A. Shumilin - experimental construction  
 Engineer V. L. Yakovlev - airplane engine construction; designer  
 of the GM-34 engine.

**Basic problems undertaken at TsIAM:**

Ceiling of aircraft  
 Increasing the power of aircraft  
 Special equipment and accessories  
 Development of an airplane Diesel  
 New materials and new technological processes  
 Computations on airplane engines

**Technical assistance is given to industries on the following problems:**

Manufacture and processing of nonferrous metals  
 Babbits  
 Casting of bronze  
 Methods of microstructural analysis of aluminum and magnesium alloys  
 Construction of airplane engines for light and heavy fuels  
 Selection of the proper atomizing equipment for high-speed Diesels

-3-

**CONFIDENTIAL**

**CONFIDENTIAL**

Testing of aircraft Diesels

Carburation

Dust filters

Nitriding of steel parts manufactured from special and chrome-nickel steels

Preparation of airplane engine parts out of plastics

Resistance furnaces for industrial use

Stroboscopic methods for studying mechanical parts of airplanes

TsIAM was formed in 1930 by the expedience of uniting the Aviation Division, NAMI and the Propeller and Engine Division, TsAGI, (Central Aero-Hydrodynamics Institute). The main mission of this institute was to give to the USSR new and powerful airplane engines.

The institute was able to determine all the production technologies for the series manufacture of the M-34 engine. Later, together with the Plant imeni Frunze (where these engines were being produced) special improvement features were added. TsIAM has also been able to develop a special "reversing" gear which permits reversing of the direction of rotation of the shaft. It must be noted, however, that the more powerful the engine, the more difficult it is to develop an effective reversing gear. TsIAM has at this time developed such a gear for the M-34 engine.

-E N D-

-4-

**CONFIDENTIAL**