

In Russia, they will create an environmentally friendly combustion chamber for aircraft engines

The Institute of Heat Physics of the Siberian Branch of the Russian Academy of Sciences began to develop a demonstration sample of the combustion chamber for aviation engines with a reduced level of harmful emissions. The project is being implemented in conjunction with the Perm enterprise "Aviadvigat" and should be completed by 2030.

The new development is aimed at solving the global problem to reduce the emissions of the aviation industry. The International Civil Aviation Organization set a goal to achieve the zero level of CO₂ emissions by 2050. Russian scientists are working to reduce the emission of nitrogen oxides, carbon monoxide and other pollutants.

The institute has already created an experimental model of combustion chamber, which allows tests in conditions close to real. Installation withstands pressure up to 20 atmospheres and high temperatures, which makes it possible to study the structure of the flame and conduct accurate measurements. These data are important for mathematical modeling of combustion processes.

In parallel, specialized software is being developed for computer modeling of the combustion chamber. The project received a grant from the Russian Ministry of Education and Science in the amount of almost 1 billion rubles in the framework of the National Center for World War.