

STRUCTURE OF DATA ACQUISITION SYSTEM OF EXPERIMENTAL RESEARCHES IN THE HYPERSONIC WIND TUNNEL

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For carrying out of scientific researches in area of super- and hypersonic aerodynamics at ITAM new experimental installation – a hypersonic wind tunnel of adiabatic compression AT-304 which allows to model air vehicles up to space speeds of flight is designed.

The structure of automation system for experimental studies in the above facility is developed. The system includes the following components which are designed during implementation of the project:

- a hardware-software complex for control of the wind tunnel operation;
- an automated technique of measurement and acquisition of experimental data;
- an automated workplace of the operator of the wind tunnel.

The structure of the automation system of the wind tunnel is proposed and creation of its first stage is in progress. The control system of the wind tunnel has been developed which is being tested. Implementation of this project is carried out with financial support of the RFBR (grant of No. 11-07-00483-a).

Keywords: a hypersonic wind tunnel adiabatic compression, the automated data input, management of wind tunnel, real time scale.