

Kosov P.A., Leonovich I.A., Ivanov K.A., Valeeva E.V.

DEVELOPMENT OF A LABORATORY STAND FOR AIR FLOW CONTROL SYSTEM

*Seversk Technological Institute of NRNU MEPhI,
65, Kommunisticheskiy Prospekt, Seversk, Tomsk Region, 636036
e-mail: kosov_pashenka@mail.ru*

The development of a laboratory stand for the air flow control system is an innovative solution for automated control and regulation of air flows. The stand includes flow measurement sensors, actuators and a feedback control system, which allows you to accurately maintain the set parameters of the air environment. Such a system is especially in demand in conditions where high accuracy and stability of air flow control are required.

The relevance of the development is due to the growing requirements for energy efficiency and environmental safety of industrial processes. Modern production facilities, scientific laboratories and building ventilation systems need solutions that can minimize energy losses and ensure precise control of air parameters. In addition, automation of air flow control processes reduces the influence of the human factor and increases the reliability of systems.

The stand can be used in various fields, including HVAC systems, aerodynamic research, ventilation equipment testing, and educational processes. In industry, it can be used to optimize the operation of ventilation and air conditioning systems, and in scientific laboratories, to conduct experiments that require precise control of air flow. Thus, the development of the stand meets the needs of both production and scientific and educational spheres.

REFERENCES

1. Ivanov A. V. Avtomatizirovannye sistemy kontrolya i upravleniya mikroklimatom [Automated systems for monitoring and controlling the microclimate] / A. V. Ivanov, S. K. Petrov. – Moscow: Energoizdat, 2020. – 245 p. (in Russian).
2. Sidorov D. M. Sovremennye tekhnologii energosberezheniya v ventilyacionnyh sistemah [Modern energy-saving technologies in ventilation systems] / D. M. Sidorov, E. A. Kuznetsova. – Nauka i tekhnologii [Science and Technology]. – 2021. – № 4. – P. 56-62. (in Russian).