

UDC 681.54

SYSTEM OF AUTOMATED CONTROL OF GLASS FORMING MACHINE TECHNOLOGICAL PROCESS FOR DEVELOPMENT OF SECTORIAL TECHNOLOGICAL SOVEREIGNTY

V. A. Ganyavin,¹ A. V. Matushansky,² and D. Kh. Mikhailidi¹

Translated from *Steklo i Keramika*, No. 12, pp. 39 – 49, December, 2024.

Original article submitted August 7, 2024.

The methodological approach to the creation of a hardware-software solution for debugging and testing of algorithms and control systems of actuators of a glass forming machine in real time mode is presented. Model tests are used to evaluate the compliance of algorithms with technical specifications and their reliability. The tests were carried out on a test bench built on the basis of an industrial sample. On the test bench the operation of the object is modeled, parameters are recorded and transferred to the monitoring system for post-processing. In the course of testing, the component base of various manufacturers available under the sanctions policy was tested. It was confirmed that such a stand can be used for rapid prototyping of control algorithms, semi-natural testing, and training of glass industry specialists. The independent control of the process control system is a contributing factor to the development of industrial equipment engineering and the localization of critical technologies. Consequently, this contributes to the formation of technological sovereignty.

Keywords: manufacture of glass, glass forming machine, test bench, hardware and software complex, sectorial technological sovereignty.