

THE STUDY OF AUTOMATION APPLICAION IN TECHNOLOGICAL PROCESSES

V.A. Gorbachev

National Research Tomsk Polytechnic University,

Russia, Tomsk, Lenin Avenue. 30, 634050

E-mail: kophep17@gmail.com

Nowadays it is difficult to imagine the world without special automated machines. This equipment allows us to accelerate the process of manufacturing products from the time of machine programming to the final product receipt. However, automation has both positive and negative sides.

Firstly, we need to understand the definition of the concept. Automation of the process is a set of methods and tools for implementing the system or systems to be controlled without direct human intervention, or with the man's participation in making the most important decisions.

There are several types of automation: 1) Partial - the automation of individual devices, machines, manufacturing operations; 2) comprehensive - provides the automation of the process area, shop, or enterprise operating as a single, automated system; 3) complete - the highest level of automation, in which all production monitoring and control functions (at the enterprise level) are delegated to the machines.

Let us consider a few industries using this technology:

- Automation of metallurgical manufacture is subject to static and dynamic weighing equipment (e.g. conveyor system). The implementation of security systems and access control has been provided.
- In the agricultural sector an automated system is used to ensure an optimum microclimate, as well as fully automated watering systems, ventilation and heating.
- In mechanical engineering different sensors connected to the controller, the feedback circuit and remote control, turning, milling, and multi-CNC are used. Temperature monitoring system and metal casting into molds are applied.

Having considered the various sectors of the industry, it will be possible to draw a conclusion about the processes that rely on the machine and those, you can trust to man and suggest what modern industry needs automation contributing to the aim of the research.

REFERENCES:

- 1. Automation of technological process [Electronic resource]. URL: https://ru.wikipedia.org/wiki/ (Accessed date: 14.03.16)
- 2. The branch solution: the development and application of automation systems in the metallurgical industry. [Electronic resource]. URL: http://it-rostov.ru/resheniya/metalurgich-prom/ (Accessed date: 14.03.16)
- 3. Automation of Mechanical Engineering [Electronic resource]. URL: http://www.rekord-eng.com/avtomatizaciya/v_mashinostroenii/ (Accessed date: 15.03.16)
- 4. Automation on agriculture [Electronic resource]. URL: (Accessed date: 16.03.16)

DEVELOPMENT OF THE DEVICE SENDING SMS MESSAGES TO POINT GUARD OF THE ENTERPRISE USING THE MAGNETIC CONTACT SENSOR AND GPRS MODULE

M.A.Gulyaev, R. A. Kondratenko

National research Tomsk Polytechnic University,

Russia, Tomsk, Lenin Avenue, 30, 634050

During the period of technical innovation, the pace of life has become fast, and we shouldn't forget about the rash actions, which can lead to dire consequences. One of such problems is that people forget to close the premises, or