

PROBLEMS OF IMPLEMENTATION AUTOMATION TO RUSSIAN MANUFACTURING

Minaeva A.V.

FSBEE HE "KSPEU", Kazan, Russia

Scientific leader PhD, Associate Professor Aytuganova Jh.I.

Market relations of Russia are developing intensively and today it is impossible to achieve sustainable success, remaining within the framework of the former production management system of the enterprise, it requires improvements. So, to get the best results of their activities, enterprises switch to automation of technological processes.

South Korea is the world leader in industrial automation. There are 478 robots per 10,000 workers in the country. The leaders also include Japan (314 robots) and Germany (292 robots). Despite the progressive nature of automation in the world, the implementation of the latest automation tools at Russian enterprises is somewhat slow.

Industrial automation in Russia is experiencing some difficulties due to the fact that enterprise teams perceive automation somewhat hostile and wary, not considering it as a necessary and sufficient tool of the production cycle, because production automation inevitably leads to a reduction in the number of production employees; there is no clear understanding of the ultimate goal of production automation. Often, the reason for slowing down the implementation of new technologies in the enterprise lies in the complete or partial lack of competent specialists in the field of automation. It also seems that the problem of slow development of the automation process in our country is the discrepancy between the cost of forces and resources on the one hand and the real return on the other, which is caused by miscalculations that are allowed at the stage of such production. The economic effect is achieved from the conditional release of workers as a result of replacing them with industrial robots. This effect is manifested in increasing labor productivity, improving the use of basic technical equipment, increasing its shift and load, and, accordingly, in the growth of the annual Fund of equipment operation. Automation of production enables quick reconfiguring production to perform technological functions with a certain processing capacity based on the maximum use of computer technology and electronics. At a time when there are many modern computer and information technologies, it is necessary to use them to automate production processes. This

Научный руководитель канд. техн. наук Айтуганова Ж.И.

will help to quickly find optimal technological solutions with a significant reduction in resource intensity in production. Since computer technologies are developing rapidly and nothing prevents their use together with technological equipment, human participation in production processes will be minimized. Enterprises of the near future are fully automated workshops with flexible organization of production, served by groups of robots with a single control center.

For the successful operation of production, it is necessary to implement a strategic plan for the automation of production processes at Russian enterprises. First, it is necessary to conduct a study to find out what needs to be replaced, what equipment needs to be implemented, and how we can increase the productivity of the enterprise. It is necessary to draw up an automation scheme and develop programs that will help implement control algorithms for each specific piece of equipment.

The results show that one of the main problems in modern industry is to increase production efficiency. This problem can be solved by creating and implementing advanced technology and high-performance equipment, new machines and devices, as well as improving existing ones. At the modern level of technology development and technology seeks maximum optimization and performance processes, which should ensure maximum efficiency at minimum cost. This can be achieved using modern production process automation systems, in particular: CAPP system, CAD system, ERP system and others. Using these systems to automate production processes will allow to work with increased efficiency and effectiveness.

Russia can and should regain its status as a global industrial state. to do this, it is necessary to have promising technologies. The specifics of creating any new product is that only what can be manufactured is designed. The latest equipment is the basis for creating the latest technologies.

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