



THE USE OF ROBOTS TO AUTOMATE HAZARDOUS AND LABOR-DEMAND MANUFACTURING PROCESSES

Fayzullayev Diyorbek O'tkir o'g'li,
diyorfayz777@gmail.com

Burliyev Abdulla Ubaydullayevich
a.burliyev@gmail.com
Jizzax Politexnika institute

Annotation:

Automation of production processes using robots has many advantages, especially in hazardous and labor-consuming processes that allow to improve worker working conditions, improve product quality and reduce production costs. However, when using robotics, it is necessary to take into account the social, economic and moral aspects of this process, as well as to provide opportunities for learning new skills and rehabilitating workers. Only if all of these conditions are met can it be guaranteed to improve the working conditions of the employees and increase the efficiency of production.

Keywords: robotics, automation, manufacturing processes, hazardous working conditions, multiworking processes, product quality, improving working conditions, productivity, economic aspects, social aspects, moral aspects, robot repair and maintenance.

Introduction

Modern robotics is an integral part of the manufacturing industry. The use of robots enables to accelerate and automate processes, reduce production costs and improve product quality. In addition, robotics can reduce the risks to workers, especially when performing manufacturing processes that are hazardous and require a lot of work.

METHODOLOGY

Robotics can be used to automate various processes, including assembly, welding, painting, assembly, etc. However, robotics is of particular importance in cases where the performance of the process is associated with risk to



workers. For example, when working with nuclear materials or working at high altitudes.

One example of the use of robotics is automation of the automation process of assembling cars. Robots can perform hazardous and labor-required work, such as welding, sawing and processing materials. This reduces the risks to workers and speeds up the production process.

Another example of robotics use is the automation of processes involving the maintenance and repair of equipment on oil platforms. Robots can perform hazardous work, such as checking the situation and replacing pipes, without posing a threat to workers.

Using robotics to automate manufacturing processes that are hazardous and require a lot of work can greatly simplify processes and reduce the risks to workers. It also reduces production costs and increases productivity.

But it is worth noting that automation of processes using robots can also lead to worker layoffs. Therefore, when using robotics in manufacturing, it is necessary to take into account the social and economic aspects of this process, as well as to create opportunities for workers to learn and rehabilitate new professions.

Another drawback of automation of production processes using robots is the high cost of acquiring and servicing them. This can be a severe limitation for small to medium enterprises that cannot invest in robotics.

However, despite some restrictions, the use of robotics to automate hazardous and labor-required manufacturing processes is an important step in the development of the manufacturing industry. This improves the working conditions of the staff and improves the quality of the product.

In addition, robots can work day and night without rest, which increases efficiency and reduces production costs. It is increasing the competitiveness of enterprises and creating new jobs in the field of technical services and repair of robotics equipment.

CONCLUSION

Using robotics to automate manufacturing processes that are hazardous and require a lot of work has many advantages. However, it is necessary to take into account the social, economic and ethical aspects of this process. Only in this case can it be guaranteed to improve the working conditions of the staff and increase the efficiency of production.



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