

THE USE OF ROBOTS IN INDUSTRY

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Machines and artificial intelligence are widely used for nowadays because they facilitate the work and make it possible to achieve the ideal product quality in any industry. The use of the first robotic arms began production in the early 1960s.

Robotics has made a real revolution in the world in two stages. The first stage was the use of electronic machines that performed the repeating tasks. They were used in the production of cars and on assembly lines of similar products basically.

The second stage was the use of more advanced robots. They better immerse the information received and respond to new information in order to actively improve.

Industrial robots can completely automate the company in modern machine-building production, increase the productivity of their use and even replace human labor. By the type of control robots are divided into: automatic, biotechnical and interactive.

Automatic robots are characterized by the fact that the control of robots and their actions is carried out without human intervention whose role is limited to setting up launching and monitoring the system.

The FANUC M 2000iA/1200 industrial robot is a good example of a robot with automatic control. This robot can work with heavy loads. Modern lifting devices such as a crane involve human intervention and moreover such work is very dangerous. The advantage of this robot is that its work is automatic and the skills are not worse than standard cranes. The operation of this machine minimizes the risk of injury in the factory.

Another class of robots is biotechnical manipulators. Another class of robots are biotechnical manipulators manipulated by a human operator. These robots have different control methods that help to perform the given work better.

HCR-A series robots are biotechnical controlled. These machines are maneuverable easy to operate and moreover they are small which makes them very convenient for interaction. The programmed machine is easy and does not require additional skills. The monitor displays a volumetric picture of the workspace. A person only needs to move the details as required by the task, and the robot will quickly remember everything and start repeating. When working with such devices, a person can control several equipment at once, which greatly saves time.

The third large class of robots is interactive manipulation robots. Their main feature - limited human activity in the control process is expressed in various forms of interaction between the operator and the computer. Consider the type of dialog control of interactive robots. It is characterized by the fact that the robot actually becomes a creative partner of a person. The mode of operation involves automatic

execution of operations by parts in combination with human communication with a computer in the control process.

Baxter and Sawyer robots are multifunctional robots with two manipulators. Their manipulators are capable of performing the same actions as human hands and controlling the efforts made. The robots work perfectly in tandem with each other. You can teach them not only through the program but also directly at the workplace by repeating all the human movements that the robot remembers and uses in the future.

In conclusion, I can say that today robots can replace manual work completely because machines are much more productive than people. Artificial intelligence can perform several actions at the same time their work is not limited in time that is machines can work around the clock without interruptions and downtime. Robots save employers money and workers are saved from harmful and monotonous work.

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