

**THE EFFECTS OF USING INNOVATIVE TECHNOLOGIES IN INDUSTRIAL ENTERPRISES.**

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**Abstract:** This article analyzes the need to introduce innovative technologies in industrial enterprises, their practical application and economic benefits.

**Key words:** Innovative technologies, Automation, Competitiveness, Enterprise management, Energy saving technologies, Improving product quality.

Innovative technologies are essential for the development of modern industry. These technologies play a significant role in increasing the competitiveness of enterprises, improving production efficiency, and creating new products. Innovations are widely used in all sectors of industry: mechanical engineering, chemistry, energy, and others.

Innovative technologies are new technologies developed on the basis of new scientific knowledge and technical solutions, which serve to increase the efficiency of production processes. Innovations include technical, economic, organizational and managerial areas. They not only improve product quality, but also provide many advantages, such as reducing energy consumption of the production process, reducing environmental impact and increasing labor productivity.

**The need to introduce innovative technologies in industrial enterprises.**

Several main reasons for introducing innovative technologies in industrial enterprises can be given. For example:

**Increasing competitiveness:** Today, the competitive conditions in the global market are very high. Through innovative technologies, enterprises can gain an advantage over their competitors.

**Improving product quality:** Innovations allow to improve the quality of products produced, to produce new products.

**Efficient use of resources:** New technologies optimize production processes, reduce waste and reduce energy consumption.

**Ensuring environmental safety:** Green technologies and waste recycling processes reduce environmental damage.

The main areas of application of innovative technologies in industrial enterprises are:

- **Robotics and automation systems:** Automated systems allow for faster production, improved quality, and increased accuracy. For example, in the mechanical engineering industry, robots can be used to produce high-precision parts.
- **Digital technologies:** Remote control and optimization of production processes using computer networks and special software. These systems increase production efficiency and enhance integration between enterprises.
- **Energy-saving technologies:** By introducing modern energy-efficient technologies, energy consumption in production processes can be significantly reduced. These technologies not only reduce costs, but also help protect the environment.
- **Artificial intelligence and data analytics:** Through artificial intelligence and big data analytics, it is possible to optimize production processes, update enterprise management systems, and increase process efficiency.

### **The impact of using innovative technologies in production on efficiency.**

The benefits of using innovative technologies in industrial enterprises include many economic and environmental aspects. For example: **Production efficiency:** By introducing innovative technologies, production efficiency increases by 20–30%. Automated systems accelerate production processes and improve product quality.

**Cost reduction:** Innovations help reduce production costs. For example, by improving energy efficiency and using resources more efficiently, costs can be reduced by 10–15%.

**Reduction of defects and waste:** New technologies reduce waste and minimize defects in production processes. This improves product quality and ensures the sustainability of production processes.

**Increased competitiveness:** By using innovative technologies, enterprises increase their competitiveness in entering the global market. This, in turn, leads to an increase in export potential.

### **Metallurgical industry in Uzbekistan.**

The introduction of innovative technologies in the metallurgical industry in Uzbekistan has led to significant results in increasing efficiency. In particular, large metallurgical enterprises such as the Navoi Metallurgical Combine and the Almalyk Combine have integrated new automated systems into their production processes. With the help of these systems, the following achievements have been achieved:

**1. Automation:** As a result of the introduction of automated production lines at the Navoi Metallurgical Combine, the production process has accelerated, the production rate has increased, the number of workers has decreased, and energy consumption has significantly decreased. For example, through automated cleaning and production processes, production waste has decreased by 15–20%.

**2. Digital control systems:** With the help of digital control systems at the plant, all production processes are monitored in real time. This system made it possible to quickly identify and eliminate malfunctions in production, as a result of which failures and downtimes were reduced, and the overall efficiency of production increased by 20%.

**3. Energy-saving technologies:** The introduction of energy-saving technologies at the Almalyk Plant, such as the use of solar energy, made it possible to reduce energy consumption in production processes by 10-15%. This not only brought economic benefits, but also helped reduce environmental impact and develop green technologies.

**Conclusion.** The use of innovative technologies in industrial enterprises not only improves production processes, but also increases overall economic efficiency. Through innovations such as digital technologies, automation systems, energy-efficient technologies and artificial intelligence, enterprises improve product quality, reduce costs and minimize negative environmental impacts. By introducing innovative solutions, industrial enterprises increase their competitiveness, increase production efficiency and ensure sustainable development. Therefore, the state and enterprise leaders need to invest in the development of innovations, support scientific and technical research and actively introduce new technologies.

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