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THE ROLE OF THE HUMAN FACTOR IN INDUSTRIAL SAFETY

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The role of the human factor in industry as a result of providing a high degree of safety on dangerous industrial objects and potentially dangerous objects in current working conditions.

The term "human factor" has been frequently used to express a new view on the role of a man in the production process.

This is an ambiguous term which describes a person who can make erroneous or illogical decisions in specific situations. The expression "human factor" is often used as an explanation of reasons for disasters and accidents, which have led to a variety of damages or casualties.

According to the World Health Organization, the death rate from industrial accidents in our time ranks third after cardiovascular diseases and cancer. It is possible to affirm that the problem of reducing injuries of various kinds in the Republic of Belarus, as well as worldwide, is extremely urgent and deserves the greatest attention.

The situation is extra dangerous when it comes to today's complex and multi-component equipment and technology. As a rule such industries use remote automatic control system which involves modern computer technology and numerical engineering. This system includes the receipt and processing of operating data about the options of all important (especially potentially dangerous) elements (devices) and the state of the production process as a whole. It quickly indicates faulty operations in the equipment.

In the result of introduction into software control systems the opportunities of modern technology, its potential has increased dramatically. Fundamentally new modern industries were set up – nuclear plants, laser settings, rockets, supersonic aircraft, new chemical and biochemical technology. However, sad consequences of huge technological disasters illustrate that even the existence of such warning devices could not allow to exclude the appearance and development of accidents.

Increase and concentration of controlled power in hands of one person makes the human factor a crucial component of industrial safety [1].

As a result, a high degree of safety on dangerous industrial objects and potentially dangerous objects is possible only if we join possibilities of modern technical warning systems, alarm systems and the systems of control to highly qualified personnel, psychologically prepared for fast and adequate response in the case of conditions that can lead to accidents. And if they still have any accident, they must be ready for actions to prevent its further development. There are no accidents without a fault of one of the "human factor" [2].

With the improvement of technology, technological skills of a human-operator (primarily psycho-physiological) also were growing (by improving the quality of general and vocational education, by increasing the amount of equipment of automated control and management system, by improving the system of medical and psycho-physiological selection). However, the possibility of a person was growing slower than technological development [3].

This was the result of the gap between personal comprehensive evaluation of new techniques and respect to their potential hazard. It is very difficult or almost impossible to foresee all types and variants of this threat on the stages of development and testing of new techniques and technologies.

Human errors can occur at all stages - from design and construction of objects to their reconstruction and decommissioning. This is due to the fact that complexity and perfection of technology, its quantitative growth, the appearance of new unknown technical failures, violations inevitably creates the preconditions for an increase in the probability (risk) of accidents.

The possibilities of a person to prevent accidents were also rising by improving education, training, the quality of the selection, the use of computer technology, computer-aided production management, improving the whole system of security tools. But never the less underdevelopment of these capabilities became increasingly noticeable in comparison to rapid development and expanding possibilities of modern technology.

Considering all the above, at present time in the Republic of Belarus there is a law which was adopted on January 5, 2016 № 354-Z "On industrial safety", approved by the Ministry of Emergency Situations of the Republic of Belarus of 06.07.2016g № 31 "On some issues of training and testing on industrial safety knowledge. "

This law regulates the issues connected with industrial safety of hazardous production facilities and (or) potential dangerous objects in the process of their usage in the field of industrial safety – their design, manufacture, construction, reconstruction, modernization and acceptance, commissioning, installation, maintenance, repair and diagnostics, technical certification, testing, maintenance, technical re-equipment, conservation, liquidation, temporary suspension, decommissioning, including the manufacture, renovation, modernization, installation, commissioning, maintenance, repair and diagnostics, technical certification, testing of technical devices (unless otherwise specified, – activities in the field of industrial safety), as well as the localization and liquidation of accidents and incidents and their consequences, and other relations in the field of industrial safety.

Thus the process of human factor control is a diverse problem, which includes complex processes of formation of moral values, physical health of society, preservation of cultural traditions, human resources and social policy and education.

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