



МЕҲНАТ МУҲОҒАЗАСИНИНГ НАЗАРИЙ АСОСЛАРИ

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Abstract: Labor protection is a theoretical basis aimed at learning ways to eliminate and protect against various types of risks that occur in human production activities. In this article, the author comments on labor protection

Key words: Labor protection, human characteristics, ergonomics, human activity, theoretical foundations of labor protection, biophysical compatibility.

Ergonomics is a science that studies functional capabilities that can ensure the effectiveness of human activity and the creation of comfortable conditions for a person during his work. In other words, this science is a science that studies the compatibility and interaction between human characteristics, machine capabilities and characteristics, and environmental characteristics. The use of the term ergonomics was proposed by the Polish scientist Yastszembowski, who used this term in his book "Chert ergonomics, to yest nauki o trude". In the field of ergonomics, there are five types of compatibility that ensure the guaranteed operation of the "man-machine-environment" system: data (information), biophysical, energetic, spatial-anthropometric and technical-aesthetic: Data compatibility. In complex systems, the worker usually does not directly control the physical processes.

Because often, from the point of view of danger, the worker is at a certain distance from the place of execution of this process. Control objects can be invisible, inaudible, and imperceptible. The worker can only see the indicators of the measuring devices and equipment, hear the signals, and thereby manage and control the progress of the process. All devices of this type are called information display devices. In some cases, the worker may use joysticks, switches, and other similar control devices. The combined state of such controls is called sensorimotor 14 devices. Information display devices and sensorimotor devices make up the information model of the machine. The worker will be able to safely manage even the most complex systems through this model. The main task of ergonomics is to create an information model that provides all the technological and energetic indicators of the machine during the working period, and at the same time allows receiving and processing all information without tiring (straining) the worker's memory and mind. Of course, the solution to this problem will depend on indicators such as ensuring safety, accuracy in work, quality, work productivity. Therefore, it is necessary that the information model corresponds to the psychophysiological capabilities of a person. Biophysical compatibility means creation of working conditions that ensure optimal work ability and normal physiological state of the worker. Permissible amounts of the main factors of working conditions (REM) are defined on the basis of the standard. But they are often not connected with the functional tasks of the worker. Therefore, in the development (design) of machines, it is necessary to conduct a special study of noise, vibration, lighting, air environment and similar factors and set their quantities according to REM. It is known that human strength and energy indicators have a

certain limit. Actuation of the sensorimotor apparatus may require blind or very little effort. In the first case, a person can get tired quickly and this can lead to unpleasant consequences in the controlled system. In the second case, work accuracy may decrease because the worker does not feel the resistance of the work lever. Energy compatibility is understood as the matching of the optimal capabilities of a person with the machine's sensorimotor devices in the ratio of expended force, power, speed and accuracy of movement. Spatial-anthropometric compatibility means taking into account the dimensions of a person's body, external spatial capabilities, and the location of the worker's body in the working position during the period of activity, i.e., during the performance of work. Solving this problem is done by determining the size of the workplace, the last point of impact of the worker during his activity, and the distance from the control devices to the worker. The complex aspect of solving this problem lies in the different anthropometric parameters of a person. For example, a seat that satisfies a person of average height will cause discomfort for short or tall people. So, what should be done in such a situation? Of course, ergonomics is the answer to this question. Technical-aesthetic compatibility is the technical-aesthetic satisfaction of the worker's requirements of the machine and work technology. When a person performs work on a machine or uses tools and devices, a person should create positive emotions in himself, that is, the appearance, shape, comfort, color and other indicators of any machine should match both the work process and the worker's feelings. In solving this problem, ergonomics is used by constructors, designers, and artists. The problem of reducing accidents (injuries, damages, diseases, fires, etc.) in modern production conditions cannot be solved only by engineering methods. Therefore, the psychology of labor safety plays an important role in ensuring the safety of work. Experiments show that most of the accidents and injuries in production are not caused by engineering-design defects in machines or technical-technological reasons, but by organizational-psychological reasons, i.e. insufficient knowledge of safety techniques, insufficient training, worker's Unknowingly, non-observance of safety rules, allowing dangerous work to those who have not undergone special training, not accepting a job according to a specialty, and many similar reasons. Therefore, 60-70% of injuries are often directly caused by the injured. Safety psychology means the use of psychological knowledge aimed at ensuring human labor safety. Safety psychology deeply studies and analyzes various processes, characteristics and situations that occur during work. Accordingly, the mental activity of a person can be divided into three different components, i.e. mental processes, characteristics and states. Mental processes are the basis of mental activity. Mental processes are divided into such types as cognition, emotional and volitional perception (feeling, perception, remembering, etc.). Mental characteristics (personal qualities). Mental characteristics include a person's character, worldview, ability to think, and personal qualities include intellectual, emotional, moral and work ability and will. Characteristics are stable and permanent.

Mental state - refers to the nature of mental activity that positively or negatively affects mental processes. Based on the tasks of labor psychology and the problems of the psychology of labor safety, the mental state can be divided into: industrial mental state and special mental states. A special state of mind can arise in the organization of preventive measures for industrial injuries, injuries and similar unfortunate consequences. The efficiency of a person's labor activity (work ability) changes depending on the level of mental stress and excitement. Mental stress has a positive effect on work results up to a certain limit. But if this property

exceeds the limit, i.e. exceeding the critical level, it can lead to a decrease in working capacity to a complete failure. Such mental stress is defined as stress beyond the limit. The standard mental load of the worker during the working period should be 40-60 percent of the maximum load level, otherwise, the load exceeding this limit will lead to a decrease in the worker's work capacity. Mental tension beyond the limit is divided into brake and nervous manifestations. Inhibitory mental tension is characterized by limited movement and slowing down. In this case, the worker cannot demonstrate his professional skills with dexterity, dexterity and mastery, as in the previous case, the thinking process slows down, the ability to remember, inattentiveness and other similar negative signs appear. It manifests itself in symptoms such as nervous tension, agitation, hyperactivity of mental tension, slurred speech, trembling of hands and voice. In this case, the worker looks rough and upset, often involuntarily observes the condition of work equipment and tools, adjusts his clothes, wipes his hands, and performs similar actions. Of course, all these situations lead to mistakes and accidents. Specific mental states that determine the mental reliability of the worker: paroxysmal fainting, psychogenic changes in mood, mental changes under the influence of taking mentally active agents (stimulants, tranquilizers, alcoholic beverages). Paroxysmal state - various types of fainting (organic disease of the brain, epilepsy, fainting), which is a loss of consciousness between several seconds and several minutes.

Of course, such a situation can cause accidents with various serious consequences, sometimes ending in death. Psychogenic changes and "affective" (affective-emotional explosion, emotional explosion) situations occur through mental influence. Depression and apathy can last from a few hours to several months. Of course, this is caused by various unfortunate events, conflict and conflict situations. In this case, indifference, lethargy, inhibition, inattention, muscle weakness occur, and these conditions can lead to the weakening of self-control, resulting in the occurrence of various types of accidents. and as a result of failure in production, an effective situation occurs. A psychogenic (emotional) narrowing of thinking is observed in a person during an effective state. This increases the speed, aggressiveness and roughness of the movement. The use of psychoactive substances, that is, drugs and alcohol, also leads to negative changes in the mental state. Mentally active agents include: stimulants (pervitin, phenamine) and tranquilizers (seduxen, elenium).

These drugs, in addition to reducing nervousness and bringing calmness, reduce mental activity, slow down the speed of action, cause apathy and drowsiness. This creates conditions for mistakes that cannot be made during work and causes accidents. Changes in mental activity under the influence of household and production factors indicate the necessity of creating and improving a system that controls the mental state of the worker before the engineer-organizers of production activity.

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