European Scholar Journal (ESJ)
Available Online at: https://www.scholarzest.com
Vol. 2 No.12, December 2021
ISSN: 2660-5562

THE ROLE AND SIGNIFICANCE OF THE HUMAN FACTOR IN ENSURING OCCUPATIONAL SAFETY

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Article history:

Received: 20th October 2021
Accepted: 20th November 2021
Published: 30th December 2021

Abstract:

The article examines the characteristics of guaranteeing human safety in the manufacturing process, taking into account ergonomic parameters and psychological states. On the basis of an analysis of human action in various conditions of activity, several recommendations are made.

Keywords: Ergonomics, Production Factor, Identification Of Hazardous Factors, Safety, Comfort

INTRODUCTION.

Because everyone is concerned about their safety and wishes to be protected, the issue I chose is still important today. The goal of my paper is to establish a link between safety and human factors. The individual himself plays a crucial role in guaranteeing labor safety, because the major cause of accidents is, in most cases, the working person, not the technique or the organization of labor. Each employee has the potential to make mistakes at work, such as making poor decisions or failing to fulfill their job properly.

The status of the production environment in which a person performs his activities is also a significant factor in labor safety. Workplace conditions can have a negative impact on human performance and health [4].

In this regard, there are four main tasks of labor protection:

- identification of hazardous and harmful production factors;
- development of appropriate technical measures and means of protection against hazardous and harmful production factors;
- development of organizational measures to ensure labor safety and labor protection management at the enterprise;
- preparation for actions in conditions of manifestation of dangers.

Human being has become the controlling body of the production system as a result of mankind's technological advancement. As a result, it is possible to classify human activity into three categories: mental, physical, and operator work (as combined mental and physical labor).

Mental work entails actions involving the processing of data, which necessitates the efficient operation of the attention, memory, reasoning, and emotions systems.

As a result of this shift in a person's position, physical labor is replaced by cerebral labor, reducing the demand for muscle work and accompanying energy consumption.

However, this places a major burden on the human mind, which must address the problem of evaluating and anticipating the effectiveness of equipment and other people, as well as ensuring trustworthy interaction with various aspects of the socio-technical system - the production mechanism.

According to statistics, the human component is responsible for more than half of mishaps in socio-technical systems (up to 90% of accidents in aviation) due to an increase in the concentration of controllable power in the hands of one person.

- competent provision of ergonomic requirements increases productivity by 100%;
- good lighting of the workplace increases labor productivity by 20%;
- reducing noise to hygienic standards increases labor productivity by 40-50%, and thoughtful introduction of music - by 12-14%;
-optimal painting of premises and equipment increases productivity by 25% and reduces unproductive losses of working time by 32%.

METHODS AND MATERIALS.

Accidents result in substantial human and financial losses. However, the technical growth of the information society is not exclusively accompanied by such "dead and lethal" catastrophes. Because the information environment is no longer limited in one room, one institution, or even one country, "quiet" events taking place in banks and management offices can lead to worldwide catastrophes. The intentional or unintentional "leakage" of secret information about an enterprise's activities, as well as the departure of key professionals, can lead to the demise of a small business.

Universal features of corporate safety culture:

-personal awareness of the importance of safety;

- knowledge and competence provided by training and instructions for personnel, as well as their self-training;

- commitment to safety priorities demonstrated at the senior management level;

- understanding of the general safety goals by each of the employees;

-increasing motivation through the use of administrative methods (setting goals, creating a system of rewards and punishments, as well as the formation of a personal position among personnel in relation to the security of the corporation);

-supervision (practice of audits and examinations);

- readiness to respond to criticism, regardless of the hierarchical level;

-responsibility of personnel developed through the formal establishment and description of job responsibilities and understanding by employees.

The psychophysiological compliance of a person with the requirements of the profession becomes a function of an individual's and a team's safety. At the household level, the function of a management specialist appears to be simple and accessible to all [3].

Everyone recognizes that not everyone is capable of carrying five-pound backpacks. Unfortunately, not everyone is aware that not everyone can work with high-volume information flows, and in many cases, attempting to cope with such a difficult task leads to personality neurotization and diseases such as hypertension, stomach and duodenal ulcers, heart attacks, strokes, and the like.

Predicting a future breach of human health and safety allows you to avoid wasting time and money studying the profession and keeping it up to date.

The users' experience with the system revealed that their initial negative (wary) attitude was eventually replaced not just by trust in the test findings, but also by the need to use the system on a daily basis. True, according to the observations of a group of 89 users, the desire to obtain high professional achievements was directly linked to the desire to use the system. Thus, after a year, 15 out of 36 individuals at one of the first businesses to use the system continued to work, and five of them were promoted to higher positions. Around 20% of employees at three other companies started using daily testing, and practically all of them, according to analysts, belonged to the category of the most competent employees [1].

As early as 2 thousand years ago, humanity began to pay attention to concerns of professional selection of persons to execute certain socio-technical jobs.

More than 200 registered users have used the system of individual psychophysiological monitoring of human brain performance, which was originally created for operators of energy and aerospace businesses.

RESULTS.

In ordinary life, notwithstanding a person's originality, our impressions of assessments are, in the vast majority of circumstances, identical to those of other individuals. It's only natural that such generalizations of the subject environment's requirements and their optimization over time led humanity to develop certain generalized criteria and requirements that became the foundation of the science of labor - ergonomics, formerly known in English-speaking countries as the "human factor".

Because of the shift in the nature of work in the twentieth century, and the trend of moving away from physical to mental labor, ergonomics (or the human factor) is now defined as the human interface with technical means and the environment, and it has enormous potential for improving health, safety, and comfort, both for the individual and for production systems.

Most other specialists agree with H. Hendrik (USA), one of the leading and recognized authorities in the field of ergonomics. But why don't major enterprises turn to ergonomists for support or create conditions for the development of ergonomics beyond its current capabilities in this case, given their strong interest in raising revenues, lowering expenses, and enhancing productivity? Why don't the appropriate branches of government establish legislation addressing the human aspect, rather of seeing it as an additional cost and a way to raise production costs? There are at least four reasons for this situation, according to H. Hendrik.

To begin with, some organizations have had to deal with poor ergonomics or "ergonomics of witchcraft" - both in the form of products and working environments that should have been designed specifically in ergonomic terms but were not, and other ergonomic developments were simply carried out by incompetent individuals [5].

"Everyone is his own head," as another well-known reason goes. On a daily level, everyone "manages" systems (car, computer, television, society). This creates the illusion of understanding the human aspect, despite the fact that it is little more than philistine "common sense." Even experienced ergonomists have their own list of so-called "common sense" decisions that have resulted in serious accidents, accidents, or economic damage - as a result of the inconsistency of such "common sense" with the realities of life.

Third, we often expect that managers will actively support ergonomics because "it is the proper thing to do." Indeed, Western managers must set aside the notion of "justifying their contribution" to the organization's competitiveness and survival, or utilize ergonomics as a "heuristic quest for a way out of a difficult circumstance." However, ergonomics is not a panacea for all ills or a sufficient foundation for widespread innovation. Any decision must be made after a thorough examination of the issue.

The standard method of decision-making is for the leader to act in conformity with the existing program. His job is to recognize the scenario and resolve it using a pre-determined plan. Predictability is required in such scenarios. The leader's job is to "feel" the situation, identify the problem, and then assume responsibility for taking action.

To handle problems successfully, a leader must not only be able to "feel" the situation, but also interpret the existing program of action in light of the current circumstances, be decisive in assuring effective action at the appropriate time, and act logically. At this level, no creativity is necessary because all procedures are pre-determined.

Selective decision-making - at this level, initiative and flexibility of action are required, but only to a limited extent. The leader assesses the merits of a variety of prospective options and attempts to choose the best answer from a number of well-developed alternative sets of activities. It is vital to be able to choose the course of action with the greatest possibility of acceptance, economy, and effectiveness while making such judgments [2]

The adaptive way of making a decision - at this level, additional difficulties are encountered, since it is necessary to find a creative solution, which (in a certain sense) can be completely new.

There is usually a combination of tried and true elements as well as some novel concepts. The leader's ability to solve this type of problem will be determined by his personal initiative and willingness to "break into the unknown." Such solutions offer a remedy to problems that may have existed in the past, but in a different form. To put it another way, the management is seeking for a fresh approach to a well-known problem.

A novel approach to accepting a solution - This is the hardest challenge to solve because it necessitates specialized skills. To tackle these, a completely different technique is required. Often, such a challenge is one that was previously misunderstood, necessitating the development of entirely new ideas and techniques to solve it. Other challenges may occur, which will necessitate the creation of a new branch of science to overcome.

CONCLUSION.

Modern working conditions necessitate sharp perception, rapid reaction, a large and active memory, focused concentration, substantial ingenuity, and determination. When operating a technical system, a person must be attentive to avoid missing a signal and reacting to a false one, have sensitivity to numerous external stimuli, and be able to separate the necessary from the unneeded. As a result, it is critical to aim for normal working conditions and to eliminate the factors that degrade mood, induce feelings, concerns, and phobias. A person's employment should be comfortable and tailored to his psychophysiological qualities.

I believe that if a person is appropriately trained in his work and is suitable for his career by nature and temperament, he will accomplish his job efficiently, avoiding mistakes and avoiding emergency circumstances. If the labor protection service is well-functioning at the company, and employees believe that the company's managers are concerned about their safety, and they do not feel inconvenienced when they arrive at work, this has a positive impact on their productivity.

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