

## CLASSIFICATION OF DANGEROUS AND HARMFUL FACTORS IN "UZBEKISTAN GTL" FACTORY

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**Abstract:** Creating a classification of dangerous and harmful factors at the "UZBEKISTAN GTL" plant means that production factors are called dangerous factors if they cause injury or damage as a result of exposure during work, and harmful factors if they cause the health and deterioration of the worker.

monitoring the actions of the worker at the workplace during the performance of the production task, preventing workers from being affected by dangerous and harmful factors, and ensuring healthy work performance.[2]

**Basic words and phrases:** harmful factors, dangerous factors, chemical factors, physical factors, biological factors, psychological factors, production, factory, safety.

**Introduction** The ultimate goal of all reforms in the economic and political spheres implemented in our country is to create decent living conditions for all citizens living

in our country. Of course, at present, the creation of decent living conditions in any society is carried out on the basis of scientific and technical progress, and this, along with the relief of human labor, creates various dangerous factors that result in various forms of harmful factors, harmful factors, injuries, injuries and occupational diseases occur. It is for this reason that a person is constantly active. Therefore, it is necessary to study the dangerous and harmful factors that occur during production processes in industrial enterprises, depending on the type of work and working conditions, and implement a plan of measures.[1] In any production process, there is no such thing as an absolutely safe system, therefore, if the study of "dangerous factors and harmful factors" and the study of the causes of their prevention is used, it will be used in both production and non-production processes. gives its effectiveness.

Production factors are called dangerous factors if they cause injury or damage as a result of exposure during work, and harmful factors if they cause the health and deterioration of the worker. [5]

It is recommended to divide the dangerous and harmful factors that occur during production processes at the "UZBEKISTAN GTL" plant into 4 groups depending on the type of work and working conditions: physical, chemical, biological and psychophysiological

**Physical factors** include machines and mechanisms in motion, their unprotected drive mechanisms, highly dusty, gassed workplace air, high levels of noise, vibration, infrasound, ultrasound, various radiations, static electric charges, high voltage electric or magnetic fields, include factors such as deviations in the level of illumination.

Chemical factors include various chemicals used or released during manufacturing processes. They can be divided into the following groups depending on the nature of their impact on humans: general poison, affecting reproductive functions; and through the way of access to human organs: acting through the respiratory tract, through the food and digestive system, and directly through the skin.

Chemical substances are divided into 4 classes depending on the level of exposure and danger to the human body:

- extremely dangerous substances (mercury);
- highly dangerous substances (chlorine, alkali);
- slow-acting substances (nitrogen dioxide);
- less dangerous (acetone, gasoline, methane, butane).

**Biological factors** include micro- and macro-organisms that cause various injuries and diseases: bacteria, viruses, rickets, fungi, various poisonous plants and animals.

**Examples of psychophysiological factors** include physical and nervous stress. Physical stress can be static, dynamic and hypodynamic. Nervous tension is caused by strong mental work, constant work in the same form, strong excitement or nervousness. According to the criterion of the level of danger, indicators such as the permissible amount of harmful substances (PDK), the average lethal dose, the permissible level or the permissible residual amount are determined in the air of the working zone [3]. Permissible amount in the air of the working area (PDK-REM) is understood as the amount of harmful substances that do not adversely affect the health of the worker even when he works in a daily work shift throughout his entire working life [5]. In many cases of production, these factors are common. In order to prevent accidents in production and reduce the impact of harmful and dangerous factors, complete mechanization and automation of technological processes and sealing of workplaces, standardization of lighting, noise, vibration levels and microclimate indicators in production rooms, special clothing for workers timely implementation of provision of heads and personal protective equipment is required [5]. Identification of dangerous and harmful factors is required in order to determine the types of dangerous factors, their assessment form, criteria and sources of occurrence as a result of the implementation of technological processes at the "UZBEKISTAN GTL" plant. The danger is potential, that is, it has a hidden character. Therefore, early detection of risk plays an important role in ensuring the safety of life activities. Identification is the process of determining the risk and its number and time indicators, as a result of which preventive and operational measures aimed at ensuring the safety of life activities are

developed. the expected damage due to the risk and other parameters are determined. On the basis of the obtained results, concrete actions are developed. Risk factors and processes at Uzbekistan GTL plant Depending on the technological processes at the "Uzbekistan GTL" plant, the following categories of risks have been identified:

- according to the mode of movement (mechanical, electric current, devices working under compressed air and pressure, rotary mechanisms);
- materials and raw materials used in the production process (natural gas, chemical reagents and reactants, finished products, etc.);
- according to the methods of work (working at height, working in containers and containers, working in the evening and at night, working in winter conditions, working in difficult moving conditions, etc.);
- according to working conditions (illumination, gaseous environment, dust, noise, high and low temperature, vibration); - according to the method of performing technological processes (manual, mechanized, automated);
- according to labor psychology and production culture (nervous and mental strain, mental strain, ergonomic factors);
- according to other categories (poisonous animal bites, earthquakes, lightning strikes, traffic accidents during transportation of workers, etc.).[2]

## References

1. The Law of the Republic of Uzbekistan on Labor Protection. September 22, 2016, ORQ-410.
2. Description of technological processes at "UZBEKISTAN GTL" plant. // "UZBEKISTAN GTL", Department of Industrial Safety, Labor Protection and Environmental Protection, 2023.
3. <https://doi.org/10.5281/zenodo.8105393>
4. MURADOV SIROJIDDIN HUSAN O'G'LI. [ANALYSIS OF "MEASURES TO ENSURE OCCUPATIONAL SAFETY IN THE FIELD OF CARGO](#)

[TRANSPORTATION AND LOADING.](#) International journal of advanced research in education, technology and management. 2023/9/29.

5. [Karimov Bahadir Oktam oqli, Nishonova Shahrizoda Chori qizi, Temirova Shahzoda Jamshidovna, Normengliyeva Fayyoza O'tkir kizi.](#) [SAFETY BEHAVIORAL AUDIT METHODOLOGY.](#) International journal of advanced research in education, technology and management. 2.07. 2023