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IMPROVING FIRE RESCUE IN COTTON AND TEXTILE ENTERPRISES

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Abstract
The article examines the risks arising at cotton ginning and textile plants, fuel and lubricant warehouses, as well as in oil and petroleum product storage facilities. This solves the problem of increasing the heat resistance and fire resistance of structures, and also reduces the force of a strong shock wave, hydrodynamic flow wave, flame and high pressure generated during an explosion.

Keywords: Dust, fire, explosion, shock wave, building material, cement, construction, new generation additive, heat, flame.

Introduction

Analysis of injuries occurring in processes ranging from cotton production in the field to the production of finished cotton products shows that all types of injuries result from uncontrolled events that directly or indirectly affect workers. Strengthening control leads to increased safety. Hazards are a central concept in occupational safety science, and the number of signs characterizing the hazard can be increased or decreased depending on the control objective. In order to ensure safety in production facilities, the concepts of risk taxonomy, risk quantification, and risk comparison, /equalization/, and identification are included, through which the goal of preventing adverse events affecting employees, that is, ensuring safety, can be achieved.

Taxonomy is the process of achieving security by categorizing and systematizing complex phenomena, concepts, and objects that are relevant to the activities of people working in an enterprise. The science of taxonomy studies the order of hazards in organizing theoretical knowledge in the field of human activity safety. It directly divides production hazards into parts and studies the causes of their occurrence.

a) In any type of activity, risks are natural, technical, environmental and mixed in terms of their origin. Cotton and textile enterprises are mainly exposed to all types of risks, and natural hazards such as earthquakes and floods cause natural risks. The use of equipment and machines in production mainly causes technical hazards. Depending on the type of activity, hazards can occur in physical, chemical, biological and psychological situations. The hazards that arise are divided into impulsive (i.e. involuntary action) and cumulative (suddenly occurring) types of hazards depending on the occurrence of negative consequences.

b) It is necessary to control the risks that may arise as much as possible, since the risks are observed to be distributed in relation to the lithosphere, hydrosphere, atmosphere and space.
v) Ishlab chiqarishdagi jarohatlar va ish bilan bog‘liq bo‘lgan baxtsiz hodisalar ortidan yuzaga kelgan xavflar charchash, isib ketish, sovub qolish, kasallanish, jarohatlanish, xalokatlar, yong‘inlar va o‘limga sabab bo‘luvchi oqibatlarni keltirib chiqaradi.
g) Any accident creates risks, and these risks are divided into social, technical, and environmental types based on the damage they cause.
d) When analyzing the risks that arise, their manifestation is divided into environments related to household, sports, road transport, production and military exercises.
e) Risks arising from activities are of simple and derivative types, and if they arise as a result of the interaction of simple ones, they are classified as derivative types.
k) The person himself is the cause of the emergence of all kinds of risks, they are active and passive, highly effective and weak in terms of their impact on the person. In the passive case, the person himself is the cause.
While all of the reasons cited are risks directly related to human activity, the level of risk of the types of activities determined by the type of products produced by manufacturing enterprises also plays a key role in the emergence of risks.
The elimination of risks in cotton and textile enterprises, that is, ensuring safety, is theoretically based on the taxonomy section, which determines the level of risk of activities. Its classification is approved by Resolution No. 177 of the Supreme Council of the Republic of Uzbekistan dated June 24, 2009, and is divided into 20 classes based on the established rule for occupational risk. The risk level of cotton and textile enterprises is determined based on quantitative, scoring, and other assessment methods, and is studied in the section on risk quantification. The most common risk assessment methods in this section are courage, risk, and fear.
Based on the specific characteristics of its activities, the employer will need to establish a procedure for implementing the following measures for occupational risk management: identifying risks, assessing the level of occupational risk, and reducing the level of occupational risk. For this purpose, the head of the enterprise will involve a labor protection service specialist or a representative body authorized by them.
In the cotton ginning and textile industries, there are also thermal hazards during fires, which are the risks of exposure to unprotected parts of the body from high-temperature machinery, equipment, and high-temperature materials, liquids, or gases, as well as from open flames and the heat surrounding the surface of high-temperature equipment. Improperly established working conditions can lead to corneal burns, risks and climatic hazards associated with the effects of microclimate, exposure to low and high air temperatures, and thermal hazards resulting from the effects of humidity and air velocity. The risks of oxygen deficiency in the air in enterprises are considered as the risk of oxygen deficiency in closed technological volumes, i.e. the risk of oxygen deficiency due to the displacement of oxygen by other gases or liquids, and the risk of oxygen deficiency in underground structures. Barometric risks arise due to suboptimal barometric pressure, an increase in barometric pressure or a decrease in barometric pressure, as well as sudden changes in pressure. The type of risks also includes the associated risks associated with exposure to chemical agents and fibrogenic aerosols.

It is known that the main harmful factor in cotton ginning and the textile industry is dust, which causes the risk of dust exposure to the eyes; damage to the respiratory organs by dust particles, the risk of dust exposure to the skin, the risk of breathing air containing lubricating oils, and the risk of respiratory hazards caused by air containing cleaning and degreasing agents.

Workers in the cotton and textile industries are exposed to risks associated with manual handling of loads, lifting loads exceeding the permissible weight, bending the body, unhealthy working conditions associated with excessive physical exertion, and physical strain resulting from periodic lifting of heavy machine parts, as well as mental strain, stress, and visual analyzer overstrain due to the impact of the severity and intensity of the labor process.

When using machinery and equipment used in the textile industry, there may be risks associated with damage to the eardrum due to noise, vibration, light exposure and exposure to non-ionizing radiation, risks associated with not being able to hear the sound signal, risks associated with local vibration and general vibration exposure when using hand mechanisms. There may also be risks associated with insufficient lighting in the working area, excessive light brightness or reduced contrast.

The risk of improper placement of the workplace can be followed by the risk of performing electrical installation work on high-voltage transmission supports, the risk of performing electrical installation work on poles and supports, and the risk of performing underground work at great depths, in tunnels, and diving work.

The main risks at the enterprise are fire and explosion. Fires cause risks associated with inhalation of smoke, harmful gas vapors and dust, flame, increased ambient temperature, low oxygen concentration in the air, exposure to fire extinguishing agents, and exposure to fragments of destroyed buildings, structures, and equipment. The explosion is followed by spontaneous combustion of flammable materials, explosions caused by fire, shock wave hazards and burns caused by the explosion, and the risk of rockfall during the explosion.

The list of all the risks presented helps to prevent risks and ensure safety in production coronas. All of this directly depends on the managers and employees working in the enterprise, and if the organizational work in the enterprise is not properly organized, it creates risks associated with organizational shortcomings.

The formation of a risk list serves to identify the sources of all risks in the enterprise and clearly describe the ways to implement them. Risks that are not identified in the formation of a risk list may be overlooked due to the fact that they are not considered further, therefore, risk identification is considered effective. Identification is necessary to determine which elements, technical devices, technological combinations or processes in the technological system require serious analysis and which are of little importance from a safety point of view. Hazard identification is a list of undesirable events, a description of the sources of risk of undesirable events, the occurrence and development of undesirable events, risk factors, a description of the sources of risks, and the results of a preliminary assessment of risks.

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