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THE ROLE OF OCCUPATIONAL SAFETY AND SAFETY IN HEAT SUPPLY SYSTEM BUILDINGS (BOILERS)

Davurov B. A
Samarkand State Institute of Architecture and Construction,
4th year student of "Safety of Life"

ANNOTATION. *The article contains analysis and recommendations on reducing man-made hazards in the construction of heat supply systems, which are an important sector of the economy, as well as compliance with the requirements of labor protection and safety of workers working in such facilities.*

KEYWORDS. *Occupational safety, safety, heat supply, hazard, system, boiler, construction.*

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Introduction.

Today, the most pressing issue in the world is to meet the demand of the population for heat and electricity, as well as the demand for household products.

Therefore, at present, the Republic pays great attention to the uninterrupted supply of heat and water to the population. Therefore, in the implementation of economic reforms in our country, this area has been identified as the seventh main priority.

The emergence of the idea of district heating dates back to the 80s of last century. In 1877, the first device for district heating was built in Lockport, USA.

The heat and power center of the Tashkent Textile Combine, launched in our country in 1928-1930, became the basis for the creation of centralized heat supply in Central Asia [1].

It is known that in this area, which is of vital importance to all of us, serious problems have accumulated over the years and are now awaiting their solution. These include drastic changes to the entire heat supply and management system, the gradual transition to local heating and hot water supply systems using alternative fuel and energy sources, in particular solar energy, and the replacement of obsolete, fuel-intensive boilers. replacement of natural gas-saving equipment, modern energy-saving equipment in the heating, ventilation, air conditioning systems of buildings and structures, adjustment equipment, effective and widespread use of new technologies in the country; issues such as development and implementation are of special importance.

Methods and techniques.

Heat supply is a major sector of the economy. About a percent of the fuel extracted and produced in the country is used for its needs every year.

According to modern assumptions, heat supply will be developed in the future in such areas as the use of alternative fuels and energy sources, in particular solar energy, the gradual transition to local heating and hot water supply systems, reducing wasteful heat loss in heating networks.

As a result, the facilities of the heat supply system will be equipped with new equipment and technologies in the near future. This, in turn, requires the development and implementation of measures to strengthen the role of labor protection and safety in this system, to ensure the safety of workers. Such labor protection and safety measures include the following [2].

First, the general requirements for labor protection include:

- Organization of staff training, testing and guidance;
- Providing workers and employees with collective and individual protection;
- Monitoring the health of employees;
- Sanitation and hygiene requirements;
- Safety requirements for buildings and structures;
- Noise and vibration requirements;
- Requirements for ventilation, heating and lighting systems;
- Requirements for residential buildings;
- Requirements for working hours and rest.

Second, the safety requirements for technological processes:

- Fire and explosion safety requirements;
- Safety requirements for electrical equipment;
- Safety requirements for the management and control of production processes;
- Safety requirements for emergency shutdown of boilers;

Third, the safety requirements for the equipment.

- Safety requirements for the installation and operation of boilers and the structure of boilers;
- Safety requirements for boiler equipment;
- Safety requirements for the use of manholes, slits, covers and fire doors;
- Safety requirements for the use of boilers;
- Safety requirements for boiler bottoms and pipe grate;
- Safety requirements for protective devices;
- Safety requirements for water level indicators;
- Safety requirements for shut-off and control valves;
- Safety requirements for boiler water supply equipment and operation of pumps;
- Safety requirements for safety valves;
- Safety requirements for automatic protection devices.

Fourth, safety requirements for repair work:

- Requirements for storage of equipment in accordance with the requirements of their technical documentation;
- Requirements for technical inspection of boilers.

In addition to the above, the following can be attributed to safety work in boilers:

- check the level of manometers, safety valves, water and supply pumps, the correctness of the work of indicators, the scale of working manometers every 6 months, accuracy class with a control manometer, recording the results in the control inspection log. Manometers must be

checked at least once every 12 months in the manner prescribed by the Agency "Uzstandard", with a stamp or seal;

- Check the correctness of the safety valves by "opening" them for a short time;
- Check the condition of the backup pumps by starting them for a short time;
- Checking the correctness of alarms and automatic protection, according to the schedule and instructions approved by the chief engineer of the enterprise [3].

Main part

The occurrence of high levels of carbon monoxide in the air of boilers can also be considered as a violation of labor protection and safety in boilers. The main reasons for this are the violation of the traction capacity of air intake hoods, which occurs in the following situations:

- the blower fan and smoke extractor do not work at the same time;
- Vibrations in the size of the smoke as a result of a violation of the process of combustion in the stomach, the collapse of the burner tunnel, the formation of a mixture of fuel and air;
- small size of the smoke in the summer in natural smoke boilers;
- the interaction of pressures in the gas tracts of boilers with common exhaust when one of the boilers is switched off;
- erosion of groundwater (or water through other communications) on the roads of Dudburoni;
- Leakage of water from pipes or other elements on the surfaces of boilers, economizers;
- Combustion of structures on the heating surfaces of solid or liquid fuel boilers;
- Defects in the regulators of "gas-air" pressure ratios, smoke in the furnace, heat voltage devices and regulators;
- in the case of air taken from this room for combustion of fuel in boilers, the occurrence of air absorption as a result of a violation of the work of incoming air ventilation;
- Violation of gas density in the windshield and headset of boilers with air spray;
-changes in the type of fuel with a different heat of combustion, which is different from that provided in the program of adjustment of devices with automated combustion process, and other reasons.

The results obtained.

One of the main tasks of labor protection is to create safe working conditions for workers. Safe working conditions, ie occupational safety, is a condition of working conditions in which all the harmful and harmful factors affect the workers in the production environment.

Positive results can be achieved only when the above measures are applied in practice in a complex way. However, the development of these measures requires, first of all, the study of the type of risk, its causes.

Depending on the type of risk and its causes, methods of protection against risk factors are divided into two types: active and passive types.

Active protection is aimed at reducing the formation of risk factors or its level of impact.

Passive protection is a set of measures aimed at eliminating the impact of hazardous factors on humans, which is carried out through the organization of work, the use of personal protective equipment, the use of technical means of security [4].

In general, all the above-mentioned occupational safety and health measures ensure that all processes in the heat supply system facilities, ie boilers, are carried out at the level of standards, which, of course, is the result of effective organization of occupational safety and health in these facilities.

Recommendations.

Heat supply system facilities, ie boilers, are among the facilities where the most serious and harmful technological processes take place. Therefore, it is necessary to achieve maximum security in such facilities.

Therefore, I would like to cite the following as the most important recommendations for the provision of labor protection and safety at these facilities:

- Employees working in pressure vessels and other hazardous work must have a document confirming the training in special courses;
- in the process of installation and operation of overpressure water heaters, water heaters and boilers should be planned automatic protection system that notifies the permissible limits of fire and explosion hazard and safely stops the device or saves the process;
- the person responsible for the maintenance and safe operation of boilers must have special technical knowledge;
- steam and liquid boilers must be installed separately in the boiler room;
- entrance and exit doors to the boiler room should be opened only to the outside. Doors should not have a device that can be locked from the inside. Boiler exit doors must not be closed during operation of the boiler;
- storage of flammable fuel containers and combustible lubricants in the boiler house should not be allowed.

Conclusion

In conclusion, the role of labor protection and safety in the construction of heat supply systems, ie boilers, and, above all, in the high productivity of workers, working in safe, decent conditions is very important and significant.

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