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Problems Of The Safety Analysis Of Functioning The Water Installations In Buildings

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Inadequate management of water installations in both residential and public utility buildings, is directly associated with serious health effects, felt primarily by water consumers, as well as indirectly with economic and social effects. Health risks arising from the daily use of water supply systems can be avoided or at least controlled. All activities aimed at minimizing or completely eliminating the risk of health hazards should be, above all, a priority to ensure public health. While water suppliers are obliged by law (Act on collective water supply and collective sewage disposal, 2001) to ensure the supply of water of the required quality in a continuous and reliable manner, the question arises who and how should be responsible for the quality of water in draw-off points in water supply systems. The main purpose of the work is to present the issues related to ensuring the safe operation of internal water supply systems, the provisions of the directive on the quality of water intended for human consumption (Directive (EU) 2020/2184, 2020) and the guidelines recommended by the World Health Organization (WHO) on the development of water safety plans (WSP).

Risk analysis for the purpose of determining the safety of water supply installations consists of the following activities: determination of the amount of resources and demand for water, determination of the number of recipients using the public water supply, determination of the installation's susceptibility to adverse events, the impact of threats on the safety of water consumers and the likelihood of their occurrence , determination of risk levels and its analysis in accordance with the adopted categories. The proposed risk-based methodology is based on WHO recommendations, whose main task is to support enterprises in ensuring access to safe tap water. Water safety plans are a helpful tool in ensuring water quality control in water supply systems in buildings. Guidelines for their development and implementation in collective water supply systems and water supply systems should be a priority for water supply network managers and building managers, especially priority buildings, i.e. hospitals, educational institutions, etc. (Cunliffe D., et al, 2011).

The quality of water in water installations is affected by a number of factors, but it should be remembered, that the type and nature of the threat is variable and depends on the object for which risk analyzes are carried out. In order to reduce or eliminate health hazards, it is proposed to implement procedures and programs for systematic maintenance of water installations, e.g. regular flushing, monitoring the temperature of hot tap water, using materials with certificates for the construction of installations or ensuring proper water circulation. Construction works related to assembly and inspection should be carried out by qualified personnel with appropriate permissions.

References

Act of June 7, 2001 on collective water supply and collective sewage disposal (DzU 2017, poz. 328, 1566, 2180).

Directive (EU) 2020/2184 of the european parliament and of the council of 16 December 2020 on the quality of water intended for human consumption.

Cunliffe D., et al. Water safety in buildings, World Health Organization, 2011.