

# **Reducing the Risk of Accidents at Fire and Explosion Hazardous Facilities and Their Negative Impact on the Environment Using the Monitoring System**

**D. A. Korobova, R. A. Taranov**

*Bauman Moscow State Technical University  
(National Research University), Moscow, Russia*

**Keywords:** risk analysis; the likelihood of an accident; fault tree; fire and explosion hazardous objects; intelligent video surveillance system; digital industrial safety management system.

**Abstract:** Approaches to reducing the risk of accidents at fire and explosion hazardous facilities are considered. An analysis of an intelligent video surveillance system and a digital industrial safety management system to reduce the likelihood of accidents is presented. A description of the functionality of these systems is provided. The risks of accidents occurring before and after the implementation of the proposed technical solutions are analyzed. It was concluded that a risk reduction of at least 10 times has been achieved.