

Author:	Iwona Karasiewicz
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Dissertation presents an original method defined by author for supporting selecting employees to work as traffic controllers, taking into account both factors affecting the occurrence of human errors and factors affecting consequences of such errors. The proposed expert method was developed using information collected and organized as a result of numerous analyses, including the analysis of publications in the field of human factors in different areas of the railroad transport, the analysis of standards and legal acts in the field of risk management, the analysis of the education system at school and after school during professional life, as well as the analysis of documents presenting post-accident assessments used to improve railroad transport safety. Some concepts used in air transport were also utilized.

The concept of the multi-criteria method was defined on the basis of accumulated knowledge. Concept of the method for assessing risks caused by human factor in the railroad transport system. Concept dedicated for assessing positions directly related to the railroad traffic safety. The proposed method was then defined in details, on the basis of concept, for traffic controllers, as such position is considered to be representative also for other positions influencing railroad traffic safety. The developed method allows, among others, to select employees to perform duties at a traffic post or a group of traffic posts, taking into account working conditions and competences of particular employees. It enables elimination of subjective decisions and decisions not well supported by proper analysis, being taken by persons responsible for managing employees working as traffic controllers. Implementation of such system could have a significant impact on safety, as each individual decision in this area made on the basis of subjective decision-maker's opinion could lead to increased risk and worsen the level of railroad traffic safety.

Dissertation's conclusions include suggestions regarding possible further development of the method itself as well as suggestions regarding types of work activities associated with railroad traffic safety, which could be covered.