

Modeling and Optimization of Technological Processes of Railway Transport

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Abstract: In this article the nature of the disorder depends on the human factor and human factors technical and technological break the success of technical and technological means prescribed by which came out was to analyze a statistical correlation between the presence of. An assessment of the state of labor protection in railway transport is given, the causes and sources of occupational injuries are given. For the prevention of dangerous and harmful labor factors at the workplaces of railway transport enterprises, it is proposed to create and implement the Concept of Labor Safety and prevention of industrial and occupational risk of personnel. The proposed concept contributes to reducing the risk of occupational injuries and occupational diseases, creating more comfortable working conditions for personnel.

Keywords: occupational Safety and Health, industrial injuries, labor safety model.

Railway transport is the basis of technological processes in the production process them is the most important part of its quality is a complex of railway related the whole to be done to cut off. To avoid the risk of the railway transport risks one of the main criteria of optimization -optimization of technological processes of safety-important task, its production activities necessary to perform factor solution, which reduced the role of the man. The construction of a process model to solve such a problem difficult to be done without hardware features and quantitative modelling and should provide the opportunity to get the price.[1]

Creating a safe and comfortable working conditions in the community, are working on the prevention and reduction of accidents in production "Uzbekistan railways" joint-stock company to a decrease of the trend of production employees allows you to preserve the level of injury. However, this is still significantly higher than the total figure (1-Diagram).[2]

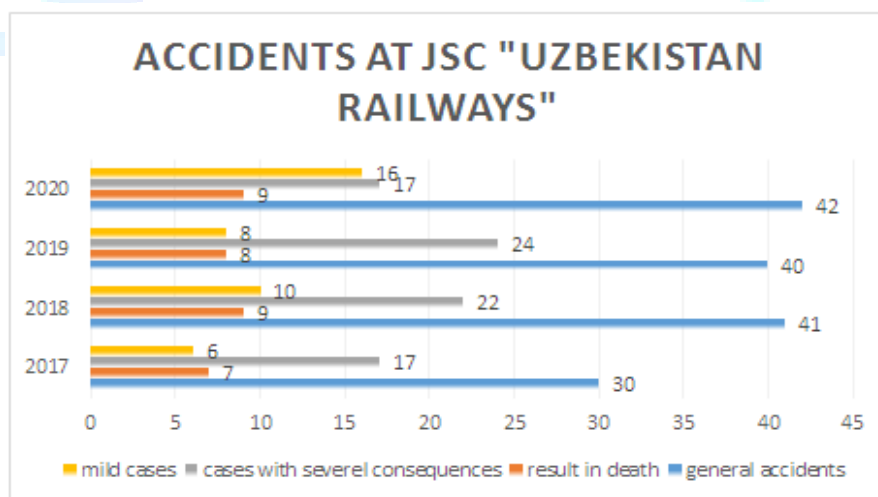


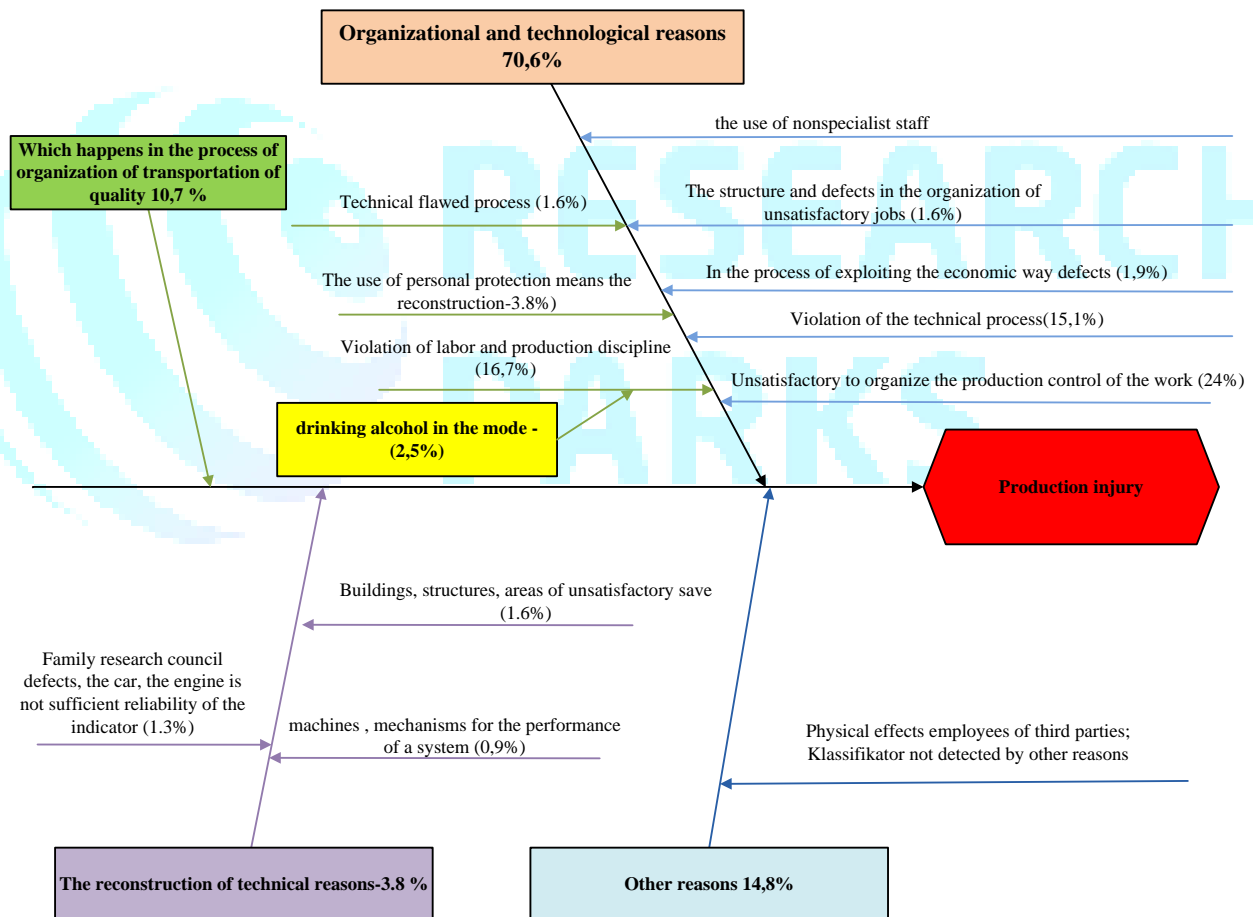
Diagramma. 1. Dynamics of occupational injuries in UTY JSC for 2017–2020

In 2020, industrial injuries in general for JSC "Uzbekiston temir yullari" were increased:

- general – to 5% (42 peoples injured, in 2019 – 40 peoples);
- result in death- to 13.5% (9 peoples died, in 2019 -8 peoples).

There are methods that can be of technological processes modeling, and registration to the following groups: systems updated and expanded official, official language systems, language-updated the system and expanded. In the first stage to determine the most important technological processes expert-statistical analysis method is used (1-picture). [3]

In particular, the operation of infrastructure facilities on the basis of available statistical data detected in different events (failures) of the frequency is determined, then it will determine the compatibility between the unhappy things. Then the type of event and the connection between the maintenance of infrastructure engineering, department of technological processes is set. So, was to identify the most important technological processes. This can complicate the problem, while the other indicators, that is, allows us to assess the potential damage from each event. The combination of the frequency of events and the potential damage will identify the most dangerous technological processes. [4]



1-picture. Group production of the causes of injury

Dangerous and harmful levels of different factors of production are available in the first place, lowering the levels of available production factors, labor security, recommendations based on the results of the evaluation of the workplace and to fulfill a "safe work" experience introduction to methods for the development of the necessary technical solutions. 2-the picture presented in the algorithm (method) in the form of a functional network of

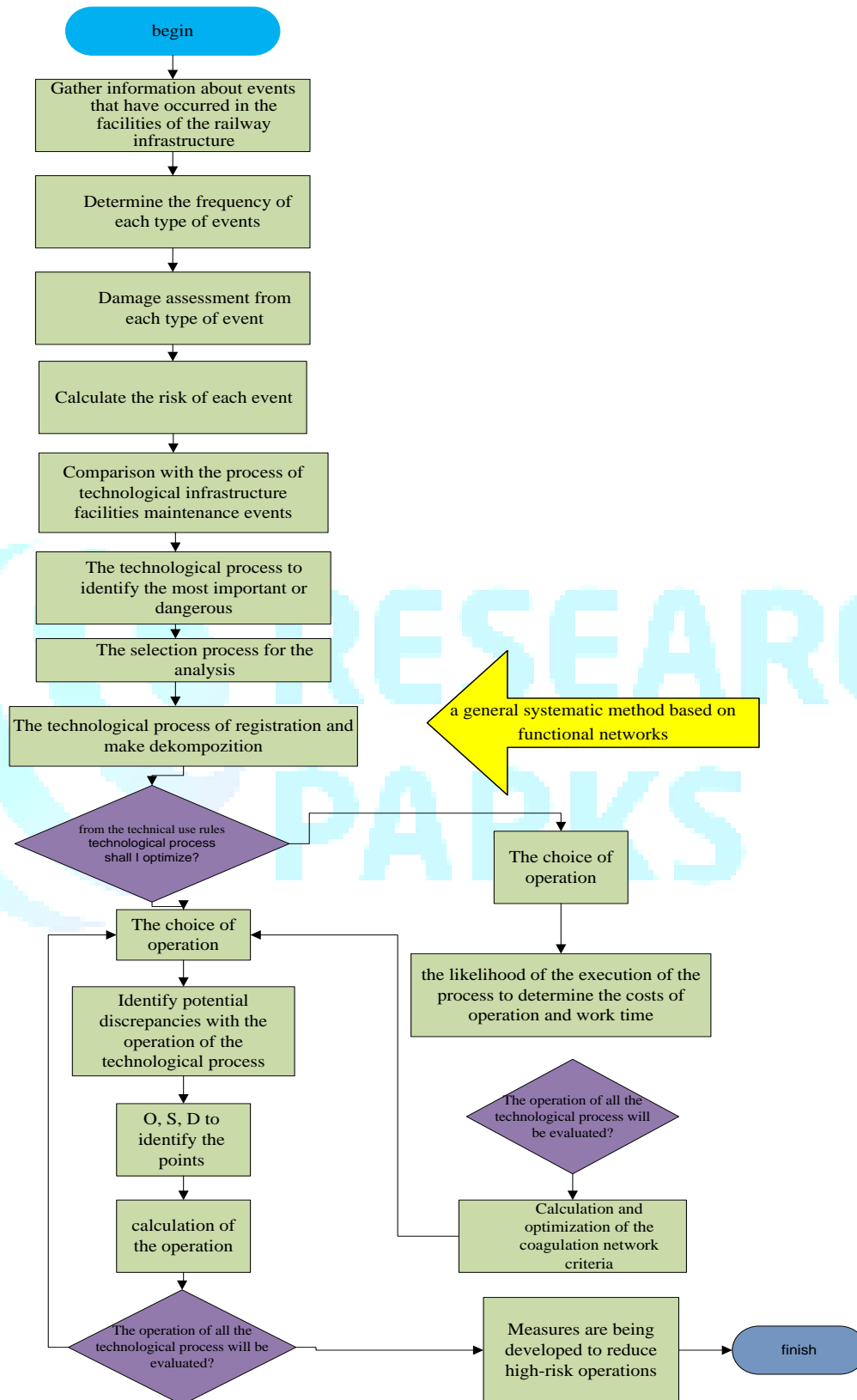
technological processes is carried out to registration, and most important or dangerous. Also, if necessary, the problem of optimization of the technological process of the algorithm in this picture - need to be solved with the formula that determines the relevant technological parameters of the operation (operation the possibility of performance, operation time, operation costs). [5]

Algorithm - design and implementation stages of technological processes in the human factor and will help implement the recommended solutions to reduce the effects of either a new or re-created the technological process is most effective for that use because they not only developed the technological process allows to analyze.

Algorithm - technological design and implementation of technological processes to assess risks and identify effective solutions that has developed in stages allows you to reduce the effects of the human factor.

Developed algorithm - or new created or technological processes, which are processed to secure the most effective methods because they not only allows the analysis of technological processes and together they developed one of the same:

- performance and network description allows network operations to make decisions;
- due to the human factor technological analysis of unfortunate events that allows you to decrease the efficiency of the process of implementation;
- show all the possible options of the transformations in the technological process;
- as a whole the operation and process efficiency, quality, reliability assessment of quantitative indicators, using them as, optimization of technological processes allows for.



2-picture. The design and implementation of the technological process identify risks and technological stages of the evaluation algorithm**References:**

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