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The Center of the Single Dispatchers Center Results Of Gigienic Assessment Of Work Condition

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ABSTRACT: This article presents the results of the integral scoring of the severity and intensity of the working conditions of train dispatchers. Based on the materials of the cards, the working conditions of the workplaces are calculated to determine the category of severity of labor, fatigue and the performance of train dispatchers.

KEYWORDS: railways, single dispatchers center, creative approach, work condition, hygienic events, measures tools, fatigue manner, work ability.

I. THE RELEVANCE OF THE ISSUE

In the direction of development and liberalization of the economy adopted in five priority areas of development of the Republic of Uzbekistan in 2017-2021 the tasks of modernization and diversification of the leading sectors of the economy, ensuring stable development of the economy, the gradual introduction of effective high tech and technology have been defined [1].

It is essential to note that one of the most important reforms in the country's economy is the modernization and improvement of the railway transportation system, further enhancing its governance capacity.

Nowadays, many passengers and loads are carried out in time by "Uzbekistan railways" stock society. For example, 21,6 thousands of passengers and 86,41 million tons in 2017 years; 22,62 thousands of people and 94,79 million tons loads were transported in 2018s.[2].

Single dispatchers center in the system of "Uzbekistan railways" stock company is the main role of ensuring the train movement in all directions, operations, as the direct center of administration and reaches the passengers, cargo at the destination which is specified time in the timetable. Therefore, full suitability of train dispatchers with hygienic requirements ensures substantial guarantees and practical implementation of the organization of safe and secure movement of passengers and freight trains by schedule. The above information defines the subject of scientific research as crucial and relevant.

II. THE LEVEL OF STUDIED PROBLEMS.

It is important to control services both directly and indirectly in railway and the efficiency of transportation and quality of service, working conditions of train dispatchers, taking into account that the controller working conditions and hygienic measures are based on scientific assessment of the organizational, technical, social development and implementation of the authors Elizarov B. B., Podgornaya T G., Tsurkan V. G., Panasovskaya LS, Dudnik I.N., Nersesyan LS, Chumak V.I., Karaulovskaya E. A., [3] Rashidov V. A., Buronov I. B., [4] Hudoykulov J. B [5] and others. In particular, hygienic assessment of labor conditions and the harmful factors of their impact on labor activity, harmful factors are influencing the analysis of eye analyzer, hygienic measures improve the working conditions of the dispatchers, as well as the organization of leisure and medical aid and rehabilitation programs have been developed.

Recommendations and the results of the given researches have an important role. But these recommendations that were given by authors have specific characters, there are not any expected results of using them for developing "Uzbekistan railways" stock company of single dispatchers center and can not improve the condition of work through dealing with direct way. Nevertheless, the methods of researches can be creatively useful for implementing and learning the conditions of workplace and labor of dispatchers centers.



The article analyzed the results of certification of working conditions at the workplaces, which were carried out in accordance with the type and size of the work performed by the train dispatchers, the technical facilities they used (radio communication, PK, VST and others).

III. PROGRAMMS AND METHODS OF RESEARCHING

The methods established with the requirements of the Official Regulation [6] which were put into practice in the Republic of Uzbekistan were used in the hygienic evaluation of train dispatchers' work condition. Used ways were standardized, parameters of measurement can be hazardous and harmful production factors determining for working conditions were measured by means of measuring equipment providing adequate reliability of their determination, and mathematical statistical methods were used in processing of results of measurements.

Programs of experimental researches are included in the map of workplace condition, the labor process of requiring production and its factors of condition: actual concentrations of harmful substances in the workplace, actual levels of electromagnetic radiation in noise, infrared, ultrasound, vibration, non-ionizing electromagnetic, optical range, production rooms and open areas microcircuits, WBGT-index ($^{\circ}$ C), production chambers of the year, light areas, cooling rooms for non-heated and technological standards, microcircuits of lighting rooms, lighting conditions of production rooms, weight and intensity of ionizing radiation have been accomplished.

IV. OBTAINED RESULTS OF ANALYSIS.

Evaluation of work conditions, which included working conditions in the workplaces, combined with measuring equipment measurements, complex and joint hazardous and harmful factors in production. Then, according to these conditions, assessment of harmful factors is happened: relatively high classes and levels of harm; general assessment of working conditions under the same conditions as Class 3.2 under the joint effects of three or more factors of grade 3.1; 2 or more harmful factors were rated one degree in accordance with working conditions under conditions of access to classes 3.2, 3.3, 3.4 [7].

An analysis of the hygienic evaluation results at the workplace certification of train dispatchers indicated that their working conditions were based on the actual concentrations of harmful substances in the workplace such as, noise, infrared, ultrasound, vibration levels of 2.0, non-ionizing electromagnetic radiation by 3.1, microclimatic indicators in cold season, lighting conditions of production chambers, atmospheric pressure, 2.0 grades by the difficulty of work, by the influence of the labor load on the class 3.2. belonging to the class.

According to the condition of the place of train dispatchers activity and general hygienic results are appropriate to 3.3 class.

In accordance with the Charter of Attestation [6], warranties and preferences were found to fit the workplace of dispatchers in the single dispatcher center for working in harmful (3.3 class) working conditions. The duration of annual additional holidays for train dispatchers should be 7-12 days, if they have required general and specific work experience, they are given retirement 5 years before the total age at the time of their appointment and this is at the 3rd list of right positions. In order to determine the level of workload of the train dispatchers with regard to the severity of the salary, the degree of fatigue during the general shift and the level of their ability to work, the impact of the dispatchers on the weight and fluidity of the working conditions was assessed by the method of the integral score [7]. At the same time, according to 3.1, 3.2 and 3.3 terms of working conditions, hazardous and harmful factors of working conditions are considered and scores are identified [7]. 2.4 points over the permissible level of work (RED) in the workplace, 5 points for work (with fingers) during shift (stereotype), 5 points on discomfort (discomfort) 3 points on the duration of the observation period, 2.4 points on the object's observation scale, 3 points for the duration of the shift, 6 points for the occurrence of nervous loading [7].

Based on the results, the points of the integral scores of train dispatchers with heavy and volatile characteristic of work were determined by the following formula [7]:

$$T = x_{\max} + \sum_{i=1}^n x_i \times \frac{6 - x_{\max}}{6 \times (n - 1)} = 6 + 26,8 \times \frac{6 - 6}{6 \times (7 - 1)} = 6 \text{ degree.}$$

Here x_{\max} – the highest value of the points being taken into consideration in the evaluation, $x_{\max} = 6$ ball; n – general amount of factors, $n = 7$ pcs; x_i – considered i - balls of factors, $i = 1, 2, 3, \dots, n$, they are the total sum of scores,

$$\sum_{i=1}^6 x_i = 26,8 \text{ ball.}$$

It was determined that train dispatchers' activity was the sixth category with the value of the integrated evaluation score of labor activity [7].

Factors of considered harmful production of total sum of scores based on $\sum_{i=1}^6 x_i = 26,8$, The percentage of fatigue that may arise during the shift of train dispatchers can be determined in percentages. It is desirable to use the empirical formula developed by the researchers [7]:

$$Y = \frac{\sum_{i=1}^n x_i - 15,6}{0,64} = \frac{26,8 - 15,6}{0,64} = 18\%$$

Here: $\sum_{i=1}^6 x_i = 26,8$ – the total amount of considered factors; 15,6 and 0,64 – regression coefficients;

According to the results, the percentage of fatigue state of dispatchers is 18. The sum of the workload of the train dispatchers on the basis of the value of the state of fatigue was calculated by the following formula:

$$R = 100 - Y = 100 - 18 = 82\%$$

Here: $Y = 18\%$ – fatigue state, in percents; 100% – the work ability of dispatchers in convenient labor condition, in percents;

During the hygienic evaluation of the train dispatchers' work environment, the labor force dispatchers' ability to work in the shift is 82 percent, ie there is a possibility of working in stress situations, which, in turn, has a negative impact on the quality of work and decisions they make.

V. CONCLUSION.

1. According to the results of an analysis of the working conditions of the train dispatchers based on the hygienic working conditions of the train dispatchers, the overall hygiene value of workplace occupations in the workplace where the train dispatchers operate, is equivalent to class 3.3 (in the case of the Unified Dispatch Center of the Joint-Stock Company "Uzbekistan Railways");

2. Guarantees and preferences that are appropriate for the place of work of train dispatchers of a single dispatcher center, duration of additional annual leave of train dispatchers, holidays to 7-12 days, their position, is included in the 3 nd position of the right to retirement 5 years before the total aggregate age, provided the general and specific internship is required;

3. Integral scores have been calculated on the basis of the qualitative parameters of labor conditions, the train dispatchers have a weight of 6 degrees of hardness and stress, 18% of fatigue, 82% of working ability in working conditions, and train dispatchers 12% compensation [compensation] must be paid [7];

4. One of the main directions of the state policy in the field of labor protection is to define the priority of the worker's life and health as a result of the results of production, rather than to improve the inconvenient working conditions, by providing overtime compensation to train dispatchers working in such conditions, the solution will ultimately lead to a sharp increase in the likelihood of their occupational disease.

5. Train dispatchers have been identified as the focus of further research on eliminating stressors (the harmful factors in production) on ensuring the full compliance of working conditions with the requirements of sanitary and hygienic rules and norms and elaborating workplace based on the principles of ergonomic biomechanics.

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