

Analysis of Employees' Labor Activity Load Indicators

Yuldosheva Ozoda, DSc, Tashkent Textile and Light Industry Institute, Tashkent,
ozoda5926@gmail.com

Hamidullayev Fathulla, PhD student, Tashkent State Technical University

Muqimov Nuriddin, assistant

Abstract:

On average, 5,000 people worldwide die from accidents and diseases at work, which is 2.3 million to 2.3 million per year. 350,000 of them are production accidents and 1.7-2 million production-related diseases. This is also caused by the fact that indicators of workload of workers are not taken into account. The article provides information on the analysis of indicators of workload of workers.

Key words: Video Chronometry, object.

Introduction

In the video images obtained from the results of the video chronometry of the work activities of the workers, the body states of the worker during the work process (sitting, bending the body forward, sitting and standing) and the times of the types of activities were determined by the method of separate observation of the frames recorded in the video image.

Workers have their own characteristics of labor activity, they perform their activities in a sitting position, in a sitting position with the body bent forward, and in a standing position. [1].

Research methodology It is known that movement of workers causes loading of the musculoskeletal system.

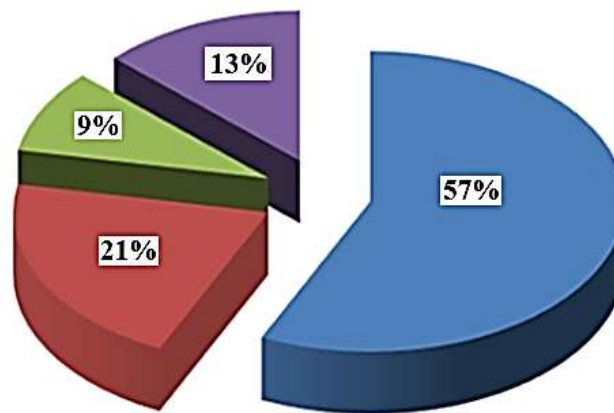


Figure 2. Body position diagram of a press worker

Therefore, it is necessary to study the ergonomic issues related to their work in the workplace and to evaluate their working conditions in terms of severity and stress, to create scientifically based innovative and technical solutions aimed at improving the safety of working conditions, and how much time diagram of the body states of the video images of the video chronometry [2] was constructed in order to study the existence of time. As can be seen from the chart analysis (see Figure 2), the worker spent 57% of the total shift time in a sitting position, 21% in a forward-squatting position, 9% in a standing position, 13% of the time used to fulfill other needs. 57% of the shift time is close to 7 astronomical hours, which results in long-term statistical loading of the press shop worker's musculoskeletal system. 21% of the shift time is about 3 astronomical hours, during which the press shop worker works in a forward-squatting position, and in this position, the press shop worker's musculoskeletal system is significantly statistically loaded. Also, a press shop worker works in a standing position for more than 1 astronomical hour during 9% of the shift time. The work of a press shop worker is a heavy work activity resulting from a significant load on the musculoskeletal system and the intensity of work related to the reception, processing, storage and transmission of information is under the combined (complex) influence of harmful factors in production. Therefore, eliminating the negative consequences of the statistical loading of the musculoskeletal system of the press shop worker leads to the improvement of working conditions. [3].

During the attestation of working conditions, the severity and level of stress of the workers of the pressing shop, the types of activities they engage in during the work hours listed above, and the body position (posture) while they are engaged in these types of activities are not taken into account. Video chronometry to take into account the body position (pose) of the press shop worker in terms of the total time spent by the press shop workers on individual operations and during the performance of these operations (during employment) and on the basis of the results obtained in order to use the methods of employment coefficients, it was determined that the total time of the workload of the workers of the pressing shop is equal to the sum of the times spent on performing individual operations.

Based on the obtained results, the coefficient of workload of the workers of the pressing workshop was determined using the formula.

$$K_{load} = \frac{T_{load}}{T_s} = \frac{626,4}{720} = 0,87\%$$

in this T_c - shift time, $T_c = 720$ min, $T_{\text{юк}} = 626,4$ minute was calculated by video chronometry of

the labor activity of the press workshop worker.

From the results presented above, it was concluded that the total value of the loading coefficient of the labor activity of the press shop worker is equal to the sum of the loading coefficients of individual operations.

The actual value of the labor load coefficient of the workers of the pressing shop was taken into account in the values of the coefficients from the regression equation used in the integral assessment of their working conditions. Accuracy in fatigue detection and other benefits based on quantitative and qualitative indicators. It is known that when a press shop worker is required to identify a potential conflict situation (PCS) and quickly eliminate this situation in such conditions, radio communication with railway station staff, interaction of a single press shop worker with press shop workers, video terminals the sum of the times to perform a specific action, to communicate with the management on various issues, to record the decisions made in non-standard situations increases further, in the case of non-PCS - it decreases [4].

Summary. During the hygienic assessment of the working conditions of workers, the times determined by the video chronometer according to the weight and strain of their work should be determined taking into account the loading factor. This coefficient is used to determine the state of the body of the press shop worker during the work included in the map of working conditions according to the attestation, the intellectual weight indicating the stress in the work process (the content of the work, reception (perception) of signals (information) and their evaluation, the level of complexity of the task, the nature of the work being performed), sensory weight (duration of attention, density of signals and messages during 1 hour of work, number of production objects to be monitored), weight on the vision analyzer, differentiation of the duration of attention to the observation of the difference size of the effect, the burden on the visual analyzer (continuous observation through the screens of video terminals, the burden on the auditory analyzer, the burden on the hearing aid), the emotional burden (level of responsibility, the importance of the error, the level of safety for another person's life), the uniformity of severity (the number of elements required for the execution of simple tasks or repetitive operations, the duration of performing simple production tasks or repetitive operations, the time of active actions, the process monitoring of the progress), the employment and load factor of the workers of the train pressing shop by types of activity should be taken into account when determining the indicators of the work mode (actual duration of the working day, shift work, fixed breaks and their duration).

References

1. O'zbekiston Respublikasi mehnat kodeksi
2. «Безопасность жизнедеятельности» под общей редакцией д.т.н. проф. Белова С.В. М. «Высшая школа», 2000 г.
3. СанПин №0015-94 «Гражданские нормативы. Перечень ПДК загрязняющих веществ в атмосферном воздухе населенных мест на территории Республики Узбекистан».