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THE USE OF TECHNICAL DEVICES FOR AUTOMATION OF CONTROL OVER PROTECTION OF LABOUR AT THE METALLURGICAL ENTERPRISES

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Abstract

In the article the use of technical devices for automation of control over labor protection and the use at the metallurgical enterprises in Russia.

Keywords: metallurgy, management, ecology, heat engineering, automation, modernization

Metallurgical production at the present time are undergoing modernization of technological processes and production capacity, which leads to the introduction in the industry automation systems.

Their main feature, due to the nature of metallurgical production is a systematic approach to all procedures within the framework of the whole enterprise:

- thermal engineering;
- metallurgical;
- environmental;
- management [1]

In the paper [2] investigated foreign experience of development of small innovative business. Small businesses represent an increasing share in the number of companies engaged in research and development including in the use of technical devices for automation of control over protection of labour at the metallurgical enterprises. The author pays special attention to the

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Japanese model of integration of science and production. It involves the construction of completely new cities, technopolises, combining R & d and knowledge-intensive industrial production. In the steel industry, it is extremely important not only to build the management processes, but also to ensure their uninterrupted flow. As a consequence, increase the quality of the product, increases productivity and saves finances.

None of the benefits can not be compared with the damage that enterprises of metal can cause to the environment, health and even human life. One of the main missions of the systems of automation of metallurgical production should be aimed at reducing hazardous waste (technological dust, carbon oxides, nitrogen oxides, sulfur oxides, and others). The set of tasks that have to solve the system of automation of metallurgical production:

- ensuring rational modes of activity of the enterprise in General and each individual of the technological process;
- ensuring specified operation of the enterprise;
- ensuring improved quality of products by reducing costs, delays, emergency situations and other adverse factors.

Krasnoyarsk aluminum plant (JSC "KrAZ") the main activities to ensure security requirements are:

- Ensuring the implementation of Policies in the field of labor protection and industrial safety of the Company, the corporate strategy and requirements of the management system of industrial safety and labour protection;
- Prevention of industrial injuries;
- Ensuring of industrial safety;
- Ensuring radiation safety;
- Ensuring requirements of labor protection;
- Legal assistance in the field of industrial safety and labor protection [3]

The organization of these processes and monitoring their implementation entrusted to the Department of labor protection (hereinafter - ate).

JSC "KrAZ" was organized the work on automation of accounting for the revealed violations of safety requirements (including possible dangerous activities and dangerous situations) and monitoring their elimination/measures with the use of the software complex "Accounting and analysis of accidents on manufacture".[4]

Designed and updated maps of identification of hazardous production factors, which indicate the possibility of development of dangerous situations and measures for their elimination or reduction to the relevant level (cards are issued subject to the analysis of a

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traumatism and occupational diseases, regulations on labor protection, mapping of workplaces, emergency response plans, technical instructions and regulations, maps, measurements of chemical and physical factors, tests and examinations, etc.) Developed and permanently improved the software package "Accounting and analysis of accidents" that allows you to automate the following processes:

- collection of statistical information on the control and prevention work;
- accounting and analysis of materials of investigation of accidents on manufacture;
- inclusion of information on the checks carried out by state control (supervision) in subdivisions of JSC "KrAZ", control the timing of elimination of the revealed violations;
- organization and control of work of commissions on certification of knowledge of labour protection requirements in the production units;
- organization and control the work of the Central attestation Commission of JSC "KrAZ";
- preparation of statistical information to public authorities in accordance with the requirements of the legislation.[5]

Continued work on improving the software package "Accounting and analysis of accidents on production":

- run in test operation software module "Roster violations" which will automate the process of data processing and analysis when conducting preventive and control work in the field of industrial safety and labour protection;
- launch into pilot operation of the automated system "Testing", which will allow to automate process of check of knowledge of requirements of labor protection and industrial safety among workers of different specialties on the basis of the computer classes of the production units of JSC "KrAZ".

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