

ANGREN COAL MINE WORKERS INJURIES LEVEL ANALYSIS

Kurbonov Azimjon Jo'raboy o'g'li,
 "TIQXMMI" Milliy tadqiqot universiteti Hayot faoliyati xavfsizligi kafedrasasi assistenti

Jalilov Azam Uktam o'g'li,
 Omonov Rustam Sobirovich,
 Abduraxmanov Maqsud Zinatulla o'g'li,
 "TIQXMMI" Milliy tadqiqot universiteti Mehnat muhofazasi
 va texnika xavfsizligi ta'lim yo'nalishi talabalari

ABSTRACT	KEYWORDS
In this article, occupational safety measures should be planned on the basis of management theory, which uses a systematic approach to the development of goals, criteria, methods and management tools. The methodology of the system approach makes it possible to identify the internal connections of the process under study, to identify the main management functions. In an effort to comply with such requirements, organizations define the conditions of their production as affecting the ability of employees to safely perform work.	Safety, labor protection, industry, injuries, accidents, accidents, occupational diseases, recommendations, coal mining, risks, violations.

Introduction

Coal mines are places built to obtain and produce coal in underground layers. These sites are designed to obtain, transport, prepare, store, and consume coal and are used for energy production, heating, electricity production and other industries.

Coal mines are one of the most important tools in the field of esthetics and coal mining and production. It is used in several industries, focusing exclusively on coal mines, energy production, other types of production and coal protection. They include the provision of heating, the production of electricity, the use of chemistry virorot

Coal mines can have the following characteristics:

Coal mines are produced as an average lake, and their external construction facilitates the process of high maintenance and processing.

Uzbekistan is one of the world's main coal mines and is ranked on its knees in coal mining after China, the United States, India, Australia and Indonesia.

The current coal mining enterprises fund in Uzbekistan accounted for 30 enterprises (45 mines and 79 sections) in 2023. Coal processing is carried out in 86 enrichment factories and installations, as well as sorting available in most coal companies.

In Uzbekistan, there are 12 coal basins and 12 deposits. Coal industry enterprises employ about 144 thousand people [1].

In 2023, coal production in Uzbekistan reached 439,3 million tons. Production increased by 28.1 million tons (7%) compared to 2017.

Imports of U.S. coal in 2023 amounted to 93.2 million tons, an increase of 6.9 million tons (4%) over 2022. Coal exports increased by 32.8 million tons by 2021 (2020 – 70.4 million tons).

The strongest coal supplier from the country's coal-mining regions is the Assange Basin, where coal is extracted more than half (58%) of all coal mined in the country and 75% of coking brands.

Coal extraction in the Region of Jerico in 2023 was carried out by 42 enterprises (2 mines in the construction phase, 22 completion and conservation phase), 1 enterprise with an open extraction method, and 10 companies for the recycling and enrichment of coal.

In 2023, all enterprises that are the underground method of coal mining have a category on harmful gases. 1 miner at risk for coal and gas emissions; 1 mine; third category (III) 5 mines; second category (II) 4 mines; The first category (I) is 5 mines. By carbon dioxide: 2 cones fall into the first category, 1 second category, 1 third and 1 cone fall into the non-hazardous category.

The main contribution to increasing the volume of coal mining in Assange is carried out by JSC "Uzbek coal", total injuries decreased by 9 in 2023 compared to 2022 and fatal injuries decreased to three cases. In 2022, 11 people were injured, 8 of them fatally. Compared to 2015, the number of injuries in the coal industry decreased by 75 times in 2022 (in 2015, 87 people were injured in production).

This has been increased to 2 accidents in 2019, primarily related to measures to improve working conditions in the workplace, the introduction of advanced mountain-mining equipment, automation and control tools for the state of aerospace in mining, multifunctional security systems, improving the labor protection and industrial safety management system of Uzbek coal companies. In 2020, there were 4 accidents.

As a result of a series of preventive measures, the level of fatal injuries in coal extraction of 1 million tons decreased by 0.03 (i.e. 1 person per 31,9 million tons). In 2015, the figure was 1,01 (1 person per million tons).

The launch of cleaning facilities will require the processing of all necessary safety equipment and compulsory equipment of equipment, from 2016 to 2023, work is ongoing to equip mines with modern multi-functional security systems and create automated monitoring systems.

Geophysical and seismic observation systems are introduced in 6 out of 2 containers.

Elements of the fire detection and fire detection system are present in almost all mines, but in total the systems are present in 38 mines (78%). In the remaining mines, the mine dispenser has not been provided with information about their launch from all automatic fire extinguishers. All fire protection requirements are planned to be implemented in 2023.

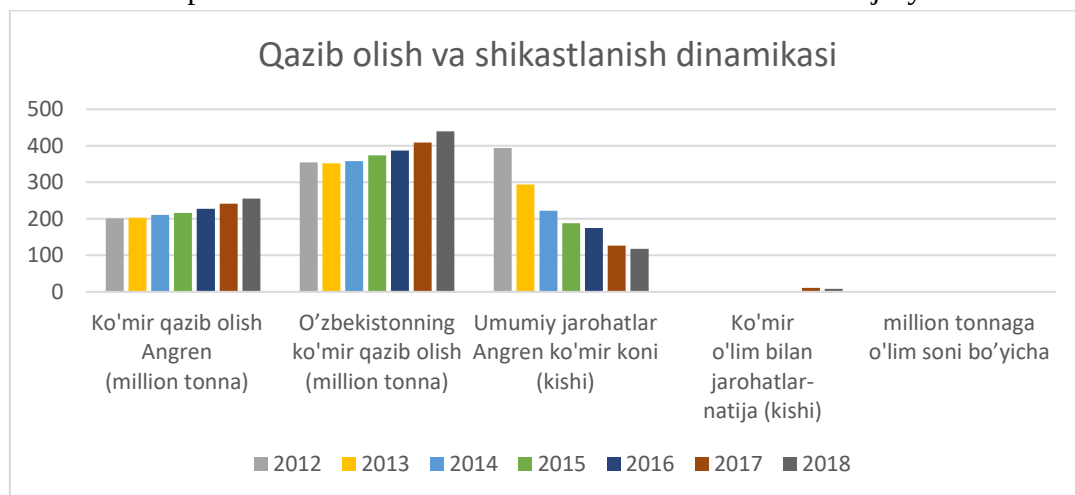
Major coal companies - "Uzbek coal" JSC, coal company JSC - have established single dispatch and analysis centers equipped with centralized control of the security situation in mines.

JSC "Uzbek coal" is required to develop the concept of developing open deposits and underground coal mines and a system for remote monitoring of the industrial safety status of high-risk facilities in the coal network.

Table 1.1-2015-2022 Dynamics of coal mining and damage in Assange coal industry enterprises.

Years	Coal extraction Angren (million tonna)	Coal mines of Uzbekistan (million tons)	General injuries Angren coal mine (man)	Ko'mir death and injuries — result (person)	by the number of deaths per million tons
2012	201,5	354,6	394	36/28	0,14
2013	203,0	352,1	294	63/38	0,19
2014	210,8	358,2	222	26/26	0,12
2015	215,8	374,0	188	20/16	0,07
2016	227,4	386,9	175	56/13	0,057
2017	241,5	408,9	127	11	0,046
2018	255,3	439,3	118	8	0.031

Thus, improving the system of labor protection and industrial safety management will increase the volume of coal extraction annually, allowing to solve the country's energy security problem, and at the same time the most important social task is to reduce the overall and fatal injury rate.



Conclusions

1. Optimal planning of preventive measures aimed at reducing workers' illness should be based on the functioning of an automated management system.
2. In the system of managing labor protection measures aimed at reducing the disease, there should be statistical information processing blocks, modeling the quantitative level of disease associated with production, classifying and optimizing preventive measures.
3. Optimization of measures aimed at reducing workers' illness should be based on the criteria for maximum health impact and taking into account technical and economic limitations.
4. The first stage of an automated management system, including statistical processing and modeling phases.

References

1. Joksimovich, V., & Vesley, W.E. (1980). Use of PRA in evaluating safety of nuclear power. *Reliability Engineering*, 1, 67–78.
2. Kerkering, J.C., & McWilliams, P.C. (1987). Indices of mine safety resulting from the application of the poisson distribution to mine accident data. Pittsburgh: U.S. Bureau of Mines Report of Investigation (RI) 9088, 31.
3. Liao, T.F. (1994). Interpreting probability models: Logit, probit and other generalised linear models. Thousand Oaks, California: Sage.
4. Marshal, G., Roberts, S., & Burgoyne, C. (1996). Social class and under class in Britain and USA. *British Journal of Sociology*, 47 (1), 22–44.
5. McCarthy, J.D., McPhail, C., & Smith, J. (1996). Images of protest: Dimensions of selection bias in media coverage of Washington demonstrations, 1982 and 1991. *American Sociological Review*, 61(6), 478–499.