RESUSCITATION OF UKRAINIAN COAL INDUSTRY BY WAY OF CREATING INDEPENDENT UNIVERSAL MINING ENTERPRISES

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The authors have highlighted the basic problems of the coal industry in Ukraine, presented and analyzed various ways of their solving using the best foreign experience, justified the need for creating of highly-intellectual innovation centres (IC) at the mining enterprises.

Key words: coal industry, mining enterprises, innovation centres (IC), implementation of innovative technologies, universal extraction complexes, labour safety.

Ukrainian coal mining industry has been in process of stagnation for many years: new mines are not opened, uncompetitive enterprises are being closed down, therefore, the level of coal output is decreasing with every passing year.

Our country has considerable coal reserves which can secure its energy supply. Ukrainian economy shouldn’t be dependent on imported energy, in particular natural gas and oil.

Foreign coal industry by far surpassed our home one in terms of labour safety, quality and level of output of economic mineral. The international experience
accumulated a lot of methods of the coal mining industry resuscitation by way of implementation of various innovative technologies.

Ideas on improving of the coal mining industry are numerous, and we’d like to give them short characteristics and to point out the main ones.

We think the first step is correct and objectively constructed organization of labour: it should concern the laws passed by the government and implemented into life by the Ministry of coal mining industry as well as the perfectly-functioning work of teams, sections and entire enterprises.

The most progressive and rational way for solving complex problems is establishing of highly-intellectual innovation centres (IC). These centres are aimed at developing plans of improvement of technical, technological and economic work of an enterprise, taking into account peculiarities of work and various factors influencing the production process.

While creating an IC in the research and production complex it’s necessary to provide the following stages:

- development of the innovative strategy of the production system;
- development of options for the organizational strategy of an IC;
- analysis of factors influencing the effectiveness of options, choosing the strategy and organizational structure type;
- identifying strategic areas of commercial activity, distribution of responsibilities;
- determining the necessary functions of support of the basic structural units, structuring of the functional services;
- allocation of strategic responsibility between different levels of management;
- formation of accounting policy and creating of an accounting centre of expenses and financial activities’ analysis;
- development of administrative projects on organizational structure’ implementation, providing them with the company staff support;
- organizational structure’ implementation, analysis of the results and making adjustments.
Experience existing in this sphere shows high economic viability of such projects, expressed in the simultaneous increasing capacity and improving efficiency of the upgraded stations.

Innovation centres, in their turn, will have to find and implement emerging technologies as soon as possible. These innovative technologies have long existed and have commonly been used in the developed countries. Their use in our coal industry is only a matter of time.

Many foreign enterprises have long become not simply coal mining ones, but turned into the universal complexes for the extraction of not only coal, but water and gas as well. It was done through timely upgrades, considerable but fully justified investments and huge efforts at the legislative level.

Effective modernization has allowed unmanned method of coal extracting, when automated systems for breaking out, loading and transportation of coal require much less human labour. Labour safety is increased by placing the remote control centres in the safe location, with a fresh stream of air, sometimes even on the surface. This way of coal winning requires non-numerous highly-skilled personnel to operate and maintain machinery.

We have to admit that these methods lead to significant job losses, which will economically cause higher unemployment and entail some undesirable consequences. But this situation can be avoided by encouraging workers to obtain qualifications and, for example, “mine” such necessary resource as water. As we know, all the mines winning coal underground face the problem of inflow of water. It’s possible to purify water and make it technical (which is carried out at some Ukrainian mines) and drinking (which has become common practice in the developed countries: it has become possible due to fines introduced to protect the environment and improve the level of non-waste production).

Many mines are dangerous in terms of gas emissions into the mine workings. This serious problem can be solved by degassing, pumped gas processing; cogeneration plants are being built and put into action. This makes it possible to use
the gas previously released into the atmosphere for practical purpose, reducing the environmental pollution.

Reducing the pollution touched upon the long-existing problem of waste heaps. Their utilization can be not consuming and complicated process, but a profitable business. Waste heaps contain not only toxic but potentially valuable chemical elements. The rock contains higher amount of coal and raw materials for production of aluminum and germanium. Processing of the waste dumps can be possible in the following ways: production of bauxite and aluminum alloys, separation of magnetic iron-containing compounds, separation of germanium, rare-earth elements, obtaining of agloporite (some porous substance which can later be used for construction of dams, production of cement, cinder block, concrete and reinforced concrete, for construction of highways and railways, in monolithic house-building). Processing of waste heaps, in addition to the economic benefits, will allow to solve the important ecological problem of destroying the waste dumps and reclamation of lands, as well as to provide dozens of jobs for the workers of restructured mines.

Implementation of these innovative technologies seems quite possible, taking into account the fact that the developed countries are investing huge amounts of money into the environment protection (for example, the money received under the Kyoto Protocol which was used for reducing pollution).

Unfortunately, the government ignores many initiatives and efforts, refuses to sell mining enterprises to private owners, a lack of funding has drastically reduced the number of scientists and engineers engaged in scientific research.

We do hope that the energy policy of the Ukrainian government will be aimed at adapting enterprises to the market environment, making them attractive for investors. Coal industry restructuring and privatization will contribute to the country’s economic and political independence.

Literature

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