

IMPACT OF PRECAST CONCRETE PRODUCTION ON THE ENVIRONMENT

Doroshko E., student

Scientific supervisor – Basalay I., Candidate of Technical Sciences,
Associate Professor of Engineering Ecology Department
Belarusian National Technical University
Minsk, Republic of Belarus

Reinforced concrete industry is a relatively new form of the construction industry. Its products are used in capital construction, in this way it has arisen and continues to develop in the areas and prices of concentrated construction. High consumption of cheap concrete aggregates and high requirement of relatively small metal reinforcement and cement predetermine economic impracticability of long-range changes, as a rule, of massive reinforced concrete products. Prefabricated reinforced concrete products are widely used in residential, civil, transport and industrial construction [1, chapter 7]. The impact of production activities is on the depletion of natural resources, pollution of water, air and soil during production, and pollution of the atmosphere from stationary and mobile sources.

Environmental impact can be considered in more detail on the example of one of the largest manufacturers of reinforced armored products in the CIS countries – OAO «SPETSZHELEZOBETON». An important trend in the production the release of concrete pipes (more than 140 kinds of pipe products), concrete sleepers and beams for turnouts. Stable market share takes enterprise producing landscaping elements: paving tiles and borders. Over the last decade, production of armored products is improved, the company new product, new production is being introduced almost every year.

The organization consumes natural resources from the environment, the processing of which produces the necessary product. Different types of waste are generated. As a result of the production activity of OAO «SPETSZHELEZOBETON» the following is affected:

- depletion of natural resources in the process of using energy, drinking and service water, atmospheric energy, raw materials and materials;

- pollution of water by industrial waste water generated during production, including waste water containing petroleum products, disposal of hazardous production products;
- pollution of the atmosphere from stationary and mobile sources, causing greenhouse effects, acid precipitation, ozone layer destruction, toxic, irritating and noise effects on humans;
- soil pollution from solid waste management of production and consumption.

In order to protect and manage water resources, measures are being taken to reduce the use of water for production needs and minimize losses. The prevention of depletion of natural resources is achieved by the introduction of energy and resource-saving technologies and technology, the use of technical water for technological needs, the system of renewable water supply, taking into account all types of energy resources consumed by the enterprise. Prevention of atmospheric pollution is achieved by functioning gas-dust-collecting plants, compliance with legal requirements in the field of ozone-depleting substances handling, use of a limited amount of freon, which has minimal effect on the ozone layer. Prevention of soil pollution - management system of production and consumption waste management, absence of production waste disposal sites at the plant, waste disposal [2].

As a result of the environmental and economic assessment of the impact of the enterprise on the environment, it was found that the greatest impact has been made on the atmosphere, as waste water is supplied to the sewerage system, and practically all waste generated at the enterprise is sent for disposal.

References

1. Экономическая география России: Учебник / Под общей ред. акад. В.И. Видяпина, д.э.н., проф. М.В. Степанова. – М.: ИНФРА-М, Российская экономическая академия, 2000. – 533 с.
2. Экологический паспорт предприятия ОАО «Спецжелезобетон».