

N. Masiakina, Master student
A. Kryvoruchko, PhD in Engr., As. Prof., research advisor
S. Sukhovetska, Senior lecturer, language advisor
Zhytomyr State Technological University

UTILIZATION OF ROCK REFUSE AT STONE PROCESSING ENTERPRISES

Rock refuse generated by stone-working enterprises has a certain composition and properties, as well as the degree of their hazard for the environment and human health. It was investigated that the total potential capacity of enterprises that can use refuse as a secondary raw material is utilized only within the limits of 11%. Stone processing enterprises, which recycle refuse on their own, have a high coefficient of income coverage and a waste efficiency ratio of approx. 1.

The ideology of rational use of available natural resources at stone-processing enterprises is based on the use of refuse. The main reasons for this problem are: raw material oriented structure of stone-processing enterprises, the basis of which is the intensive use of natural resources; obsolescence, excessive energy and material consumption, high-waste production technologies of stone processing, insufficient level of refuse recycling by stone processing enterprises, export orientation of raw materials- and energy-intensive stone production; low competitiveness of production; ineffectiveness of organizational and economic mechanism of nature use and environmental activity of stone processing enterprises. Due to these problems, the share of stone-processing enterprises in waste generation and environment pollution is significantly increasing.

Stone processing enterprises utilize just 44% of refuse (crush-rock pad for roads, building needs, etc.), about 39% is imparted for utilization to special enterprises which have permission to carry out such activities; and 18% of refuse is to be buried at landfill of solid domestic waste as a layer. Such situation indicates a low level of utilization of refuse as a secondary raw material at stone processing plants.

Thus, the efficiency of refuse utilization without harm to the environment at stone-processing enterprises at the present stage of their operation is low and requires the development and implementation of certain measures. The main measures to increase the efficiency of stone processing enterprises are: the introduction of new technologies of stone processing which will enable the development of low-waste and non-waste technological processes in stone-processing industry. Prospects of further research are connected with the substantiation of the development of secondary raw materials market.