

M. Pavlushchenko, Master student
V. Korobyichuk, PhD in Engr., As. Prof., research advisor
S. Sukhovetska, language advisor
Zhytomyr State Technological University

RESOURCE-SAVING AT CRUSHED STONE QUARRIES

European integration of Ukraine:

Earthmoving-vehicle complex is the most common complex in quarries as the primary means for the extraction of crushed stone. Drill-explosive shattering is used to prepare rock for extraction. When crushing rocks by explosion is efficient, loaders can be used for loading rock mass instead of excavators. Operation of loaders is especially effective at low altitudes of shoulders or at lower areas of rock shortpile. Today, manufacturers are more interested in application of mobile crushing and sorting machine. Currently, the EU mobile machines successfully replace stationary crushing complexes. With regard to the production of crushed stone it is applicable only at companies with small amounts of rock processing. They can reduce the amount of overload and raw materials transportations from working face to stationary crushing and sorting plants. Therefore, it can reduce the cost of mining and decrease emissions into atmosphere.

The issues on the rationality and effectiveness of these schemes application at specific companies arise while studying the problem of finding efficient technological scheme of mobile crushing facilities.

Mobile crushing complex has several advantages compared with mineral processing workshop: complete independence from the electricity mains; great maneuverability of the complex; it occupies a small area; easy to operate; it is operated by only 2 people (operator and his assistant); relatively low cost for maintenance works; it works on the internal combustion engine.

Mentioned above mobile complex will reduce the cost for transportation of rock mass and improve the ecological condition in quarry.

Considering the features of modern market economy, when wrong decisions on major capital investments can lead to bankruptcy, scientific study and systematization of technological schemes of open cast mining at crushed stone extracting quarries using mobile crushing systems and recommendations for their use are particularly important. That is why the question of the choice of mining equipment is important.

REFERENCES

1. Kuznetsov B. A. Transport at mining enterprises. – M.: Nedra, 1976.
2. Paderni, R. Y. Mining machines and complexes for open works. – M.: Nedra, 1971.
3. Tomac P. I., Naumov I. K. Technology, mechanization and organization of surface mining. – M. , 1992