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## **INFLUENCE OF WATER PH INDEX ON TECHNOLOGICAL EQUIPMENT AT MINING BY THE HYDROMECHANICAL METHOD**

In mining industry the volume of water used during minerals extraction a few times exceeds the volume of obtained rock. Technological water is contaminated not only by mechanical particles but also chemical compounds contained in rocks. The change of chemical parameters and water properties influence on the technological hydromechanical equipment.

Now, reverse water circulation is used at quarries and ore-processing plants. Technological water has a low value of pH order 3 - 3,75. The value of reverse water pH does not influence on the process of enriching but causes corrosion of equipment and pipelines, and also causes the threat of acid water leakage into adjacent water bodies with filtration water of tailings.

The aim of work is to develop recommendations on the control of pH level in technological water for increasing corrosive firmness of technological equipment and fabricated metals, as well as for reduction of negative influence on environment.

Research data showed several methods to solve the problem of negative influence of technological water pH level on technological equipment:

1) Neutralization of acid reverse water by lime. However, a reagent needs to be ground down. But this process usually does not take place at ore-processing plants and, as a result, pH level of reverse water does not exceed the value of 4-5 causing the rapid wear of pumps, pipelines and other equipment. Also there is possibility of this reagent limited supply.

2) The control of technological water pH level by ecolen. Ecolen application in tailings needs its agitation with water.

3) Methods of reverse water neutralization by soda ash. On the basis of the conducted experiments the amount of soda ash for technological water neutralization was determined. As a result, we get necessary water pH level that does not exceed 6,5-8,5.

The research data show that the most expedient method for technological water neutralization is the application of soda ash. For preparation of soda solution it is suggested to set up the equipment that will conduct and control the supply of the solution in the point of reverse water.

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