Application of selective flotation for scheelite concentration of low-grade ore in Korea
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Tungsten is an important metal that is widely used in various industries such as alloys, electron, chemical engineering, etc. Due to its very significant economic importance and high supply risk, tungsten is classified as a strategic metal. There are numerous tungsten minerals, among which scheelite (CaWO₄) is considered to be economically important minerals. Scheelite is often associated with other Ca-bearing salt-type minerals such as calcite and fluorite, which has similar characteristics. This characteristic can be one of the reasons why many researchers have conducted researches about froth flotation for recovery of scheelite. This research mainly aimed to investigate the selective flotation for scheelite recovery from undeveloped low-grade ore in Korea. Particularly, it focused on improving the selective recovery of scheelite during flotation process by using suitable flotation reagents. The effect of Na₂CO₃ on WO₃ grade and recovery of scheelite concentrates have been investigated in order to improve flotation performance. In this respect, the performance of the froth flotation in this research evaluated as compared with the results of previous researches. Furthermore, It has been verified that Na₂CO₃ can be employed not only as a pH modifier but also as a selective depressant.

![Figure 1. Zeta potential of scheelite, calcite and fluorite as a function of pH with or without oleic acid](image)

Acknowledgment

This work was supported by the Korea Institute of Energy Technology Evaluation and Planning (KETEP) and the Korean Ministry of Trade, Industry & Energy (MOTIE), Republic of Korea (No. 20172510102220) and the Korea Institute of Geoscience and Mineral Resources (KIGAM, 19-5101).

Reference


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