Derepression and Activation of Pyrite: A Review

SONG Guo-jun¹, DENG Jiu-shuai¹, XIAN Yong-jun¹, YIN Qiong², ZHANG Ying¹
(1. State Key Laboratory of Complex Nonferrous Metal Resources Clean Utilization, Faculty of Land Resource Engineering, Kunming University of Science and Technology, Kunming 650093, China; 2. Faculty of Ming, Kunming Metallurgy College, Kunming 650033, China)

Abstract: Lime depressing process is commonly used in the early stage of flotation separation for polymetallic minerals containing pyrite. This method performs better than other methods for separation methods. To obtain a better recovery, lime-depressed pyrite should be activated. In the field of ore beneficiation, the mechanism of activation of lime-depressed pyrite has been widely studied and some progress has been made. In this paper, the main factors affecting floatability of pyrite, the progress in research on the activation mechanisms of different activators, and the mechanical activating effect on pyrite were reviewed and discussed to provide a reference for the theoretical study and application of high-efficiency processing for pyrite resources.

Keywords: pytite; derepression; activating agent; mechanical activation