S4-34

Cassiterite recovery from mine tailing dump in Myeik, Tanintharyi Division, Myanmar

K. THI THAW[1], S. SOMSAK[2] & A. NUMPRASANTHAI[3]

Department of Mining and Petroleum Engineering, Faculty of Engineering, Chulalongkorn University, Phayathai Rd, Pathumwan, Bangkok 10330, Thailand
Email address: kaythaw7@gmailcom[1], Somsak6931@gmail.com[2], Apisit.nu@chula.ac.th[3]

Abstract: The research aimed to recover cassiterite ore from mine tailing dump at the Ngwe Gabar mine in Tanintharyi Division, Myanmar. The tailing dump contains 0.05% Sn, 0.002% Nb, 0.001% Ta. Wet sieve technique was primarily used to separate the sample into three sizes including +30#, -30+100# and -100#. XRF and Frantz Isodynamic Magnetic Separator were employed to measure the Sn% content. Shaking Table, WHIMs and Electrostatic Separator were employed to concentrate tin from the tail dump. The results have shown that the tin was recovered up to 72% after process. The profitability of the project was measured and reported in term of the Modified Internal Rate of Return.

Keywords: Cassiterite, Shaking Table, WHIMs, electrostatic

Warta Geologi (Newsletter of the Geological Society of Malaysia), Vol. 44, No. 3, July-September 2018