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Composition and structure of products of the joint smelting of oxidized nickel ores and sulfide copper ores

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Abstract

In this paper, the data on the joint processing of oxidized nickel ores and sulfide copper ores for copper-nickel matte and silicate slag are presented. Structure and phase composition of the products of smelting were studied using *X*-ray, electron microprobe analysis data. The species of nonferrous metals are revealed in the matte. It was founded for the first time the cooling of the matte obtained in this work was the reason of cristofite's formation. The limits of nickel, copper, cobalt and other metals concentration were clarified in the matte. One can treat the matte by routine pyrometallurgical and hydrometallurgical operations.

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