Abstract

The purpose of this study was to find the heat content of the Cu2S-FeS matte for evaluating the heat balance in copper converting. The heat content of some Cu2S-FeS mattes were determined in a temperature interval from 1073 to 1473 K by using a drop calorimeter. The heat contents of 100 % FeS, 75 % FeS-25 % Cu2S, 50 % FeS-50 % Cu2S, 25 % FeS-75 % Cu2S and 100 % Cu2S at 1473 K are 1253, 1134, 1008, 879 and 756 J/g, respectively, decreasing with increasing matte grade.

Keywords

Heat content, Cu2S-FeS matte, calorimeter.