

EXPERIMENTAL INVESTIGATION OF A HEAT TRANSFER COEFFICIENT FOR ALUMINUM ALLOYS

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Abstract

Methods to optimize ingot jet cooling during continuous aluminum casting have been experimentally investigated. An aluminum sample with a height of 200 mm and thickness of 20 mm have been heated to 475°C and been cooled using two methods – continuous and pulse regimes. The cooling water flow rate and the duration of the pulsation phases have been changed in the tests. The temperature field along the sample length has been measured, and the heat-transfer coefficients on the aluminum surface have been determined.