

Effect of the Inclination of Mold Walls on Primary Cooling During the Continuous Casting of Steel

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Abstract: The principal function of a continuous casting mold is to receive the liquid steel, and ensure its cooling in order to permit the formation of a solidified skin, and sufficiently resistant, this is the phase of primary cooling. The efficiency of this process depends on several parameters such as the casting speed, the temperature exchange between the walls of the mold and the thin crust of the slab as well as the conicity of continuous casting mold. Latter has been the subject of this work, which consists in observe the influence of the conicity of mold on the variation of the temperature field, and friction generated during lowering of the slab. the curves reflect changing the factors cited previously as a function of the conicity. The numerical simulation was conducted by FLUENT 6.0 code.

Keywords : continuous casting, conicity of mold, temperature field