

Title (en)
CONTINUOUS STEEL CASTING METHOD

Title (de)
VERFAHREN ZUM KONTINUIERLICHEN STAHLGIESSEN

Title (fr)
PROCÉDÉ DE COULÉE CONTINUE D'ACIER

Publication
EP 3488947 B1 20200819 (EN)

Application
EP 17853092 A 20170920

Priority
• JP 2016183726 A 20160921
• JP 2017009906 W 20170313
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Abstract (en)
[origin: EP3488947A1] Surface cracking caused by nonuniform cooling of a solidifying shell at the initial stage of solidification is prevented, and the occurrence of center segregation in a thicknesswise central portion of a strand is reduced. Metal-filled portions with different thermal conductivity filled with a metal having a thermal conductivity that differs by at least 20% from the thermal conductivity of a mold copper plate of a continuous casting mold are disposed on an inner wall surface of the mold copper plate in a region extending from a position at least 20 mm above the position of a meniscus to a position at least 50 mm and at most 200 mm below the position of the meniscus. The area fraction of the total area of the metal-filled portions with different thermal conductivity relative to the area of the inner wall surface on which the plurality of metal-filled portions with different thermal conductivity are disposed is from 10% to 80% inclusive. A distance (D1) and an oscillation mark pitch (OMP) that is derived from the frequency of oscillation (f) and a casting speed (Vc) satisfy formula (1) below, and a distance (D2) satisfies formula (2) below. In formula (2), r is the radius (mm) of a circle having a center at the center of gravity of one of the metal-filled portions with different thermal conductivity and having the same area as the one of the metal-filled portions with different thermal conductivity.

IPC 8 full level
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