

Title (en)
METHOD AND STRAND GUIDE FOR SUPPORTING, GUIDING AND COOLING CASTING STRANDS MADE OF STEEL, ESPECIALLY
PRELIMINARY SECTIONS FOR GIRDERS

Title (de)
VERFAHREN UND STRANGFÜHRUNG ZUM STÜTZEN, FÜHREN UND KÜHLEN VON GIESSSTRÄNGEN AUS STAHL, INSBESONDERE VON
VORPROFILIEN FÜR TRÄGER

Title (fr)
PROCEDE ET SYSTEME DE GUIDAGE POUR SOUTENIR, GUIDER ET REFROIDIR DES BARRES DE COULEE EN ACIER, NOTAMMENT DES
EBAUCHES DE PROFILES POUR DES POUTRES

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Abstract (en)
[origin: WO0211923A1] A method and strand guide for supporting, guiding and cooling casting strands (1) made of steel, especially preliminary sections (2) for girders, which are cooled by injected water (29) and are drawn. The inventive method prevents cracks, especially surface cracks, from appearing in the microstructure by adapting the cooling conditions of the surface of the strand during secondary cooling. Undercooling of the chill of the strand is prevented by adapting the cooling and support of the beam blank format to the solidification range in order to avoid an undesirable solidification structure on the upper flange edges or in other cross-sectional areas so that cooling and support are provided exclusively where a crater is formed. The casting strand (1) is cooled by guiding the temperature in a specific manner in upper supporting segments (5, 6, 7) by means of injected water jets whose width at least matches the length of the supporting rollers on longitudinal and transversal sides (13, 14) of the cross section (1a) of the casting strand, and is decreasingly supported in an analogous manner with respect to the length of the casting path and the cooling state in core areas (15) of the cross section (1a) of the casting strand on the transversal sides (14) of said casting strand cross section (1a) and cooling occurs exclusively by means of water jets (8) which are oriented towards said core areas (15).

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