

Title (en)
V-N MICROALLOYED STEEL AND METHOD FOR PRODUCING V-N MICROALLOYED AND SURFACE-CRACK-FREE CONTINUOUS CASTING BLANK

Title (de)
V-N-MIKROLEGIERTER STAHL UND VERFAHREN ZUR HERSTELLUNG EINES V-N-MIKROLEGIERTEN UND RISSFREIEN STRANGGUSSROHLINGS

Title (fr)
ACIER MICROALLIÉ EN V-N ET PROCÉDÉ DE PRODUCTION D'UNE ÉBAUCHE DE COULÉE CONTINUE MICROALLIÉE EN V-N ET SANS FISSURE DE SURFACE

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Abstract (en)
Disclosed are a V-N microalloyed steel and a method for producing a V-N microalloyed and surface-crack-free continuous casting blank. The V-N microalloyed steel is composed of the following chemical components by mass percentage: 0.09%-0.13% of C, 0.1%-0.4% of Si, 1.0%-3.0% of Mn, less than or equal to 0.05% of P, less than or equal to 0.05% of S, 0.1%-0.4% of V, 0.011%-0.2% of N and the balance of Fe and unavoidable impurity elements. A continuous casting blank is subjected to component control according to the chemical components of the V-N microalloyed steel; and the production method therefor comprises converter smelting, LF refining and continuous casting steps in sequence. According to the present invention, by means of reasonable component design and smelting and continuous casting processes, the thermoplasticity of the continuous casting blank is improved, so that a high-temperature brittle region is prevented in a casting blank straightening region of the continuous casting blank or the thermoplasticity is good enough such that no surface crack appears, the casting blank is good in terms of surface quality and does not need to be cleaned, and the production efficiency is improved.

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