Title (en)

METHOD AND APPARATUS FOR FEEDING AND CONTINUOUSLY CASTING MOLTEN METAL WITH INERT GAS APPLIED TO THE MOVING MOLD SURFACES AND TO THE ENTERING METAL

Publication

EP 0092844 B1 19870128 (EN)

Application

EP 83104073 A 19830426

Priority

US 37245982 A 19820428

Abstract (en)

[origin: EP0092844A1] Methods and apparatus for feeding and continuously casting molten metal (1) are described in which inert gas is applied to the moving mold surfaces and to the entering metal for the protection or shrouding of the molten metal surface within the mold cavity from oxygen and other detrimental atmospheric gases. The shrouding is by means of inert gas injected into the mold through a semi-sealing nosepiece (7), or directed at the mold cavity and passing through the necessary slight gaps around the nosepiece. At the same time, such inert gas is further circulated by channeling or shielding the circulated gas for blanketing and diffusing of the inert gas along the moving mold surfaces (9, 10) for cleansing them of undesired accompanying gases, such as atmospheric oxygen, water vapor, sulphur dioxide, carbonic acid gas, etc. as the mold surfaces approach the nosepiece before entering the mold region. In installations where the inert gas is directed at the mold cavity from above and/or below the nosepiece, the gas is ejected at a relatively slow flow rate so as to be noiselessly ejected, i.e. without audible disturbance, the objective being to avoid entrainment of air. Heavier-than-air inert gas may advantageously be used above the nosepiece, while lighter-than-air inert gas is simultaneously used below it.

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Cited by

EP0258469A1; EP0210891A3; AU600825B2; EP0159176A3; CN102554157A; EP0174766A3; EP0424837A3; FR2601606A1; EP0304607A3; EP0144769A1

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