

Title (en)
Submerged multi nozzle

Title (de)
Multi-Tauchausguss

Title (fr)
Busette de coulée multiple par immersion

Publication
EP 1900460 B1 20100728 (DE)

Application
EP 07016955 A 20070830

Priority
DE 102006044350 A 20060918

Abstract (en)
[origin: EP1900460A1] The submerged nozzle for inclusion of a liquid steel material under exclusion of air under the casting level of a continuous casting mold, comprises a shaft (110) with a longitudinal channel (112) extending along its shaft axis (s) and a transverse channel (114) extending perpendicularly to the shaft axis (s) with two lateral discharge openings (114-1, 114-2). The longitudinal channel with outlet-edge mouth flows into the transverse channel. A base (B) on the inside of the transverse channel has a trough opposite to the opening of the longitudinal channel. The submerged nozzle for inclusion of a liquid steel material under exclusion of air under the casting level of a continuous casting mold, comprises a shaft (110) with a longitudinal channel (112) extending along its shaft axis (s) and with a transverse channel (114) extending perpendicularly to the shaft axis (s) with two lateral discharge openings (114-1, 114-2). The longitudinal channel with outlet-edge mouth flows into the transverse channel. A base (B) at the inside of the transverse channel has a trough opposite to the opening of the longitudinal channel. The trough is formed in form of a groove, whose longitudinal axis (RL) passes transversely to the shaft axis and to the longitudinal axis of the transverse channel. The base is formed transversely to the longitudinal axis of the transverse channel. The path of the base is formed for the shaft axis (s) in sinusoidal and symmetrical manner. The cross section of the trough represents a minimum in the path of the base on height of the shaft axis. The path of the base has a constantly extending maximum (M1, M2) on the right and left symmetrical to the minimum represented by the trough. The transverse channel is formed with a negative angle of inclination (alpha 1, alpha 2) of -20[deg] in relation to the horizontal line and symmetrical to the shaft axis. The base of the transverse channel has a slit (116-1) in both sections between two maxima and the lateral discharge openings. The slit functions as additional outlet openings for the transverse channel. The base is converged in the area of the narrow side of the slits with an angle of 55[deg] opposite to the horizontal line. The cross channel has a rectangular cross-section.

IPC 8 full level
B22D 41/50 (2006.01)

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