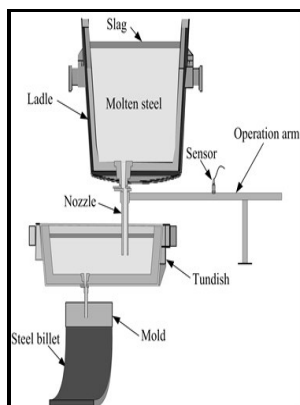


Physical and mathematical modeling of Tundish operations

Springer-Verlag - Physical and mathematical models of steel flow and heat transfer in a tundish heated by plasma, Metallurgical and Materials Transactions B



Description: -

-
Plastics.
Bakelite.
Lithuania -- Economic conditions
Engineering models.
Steel founding -- Mathematical models, physical and mathematical modeling of Tundish operations
-
Materials research and engineering (Unnumbered)
Materials research and engineering physical and mathematical modeling of Tundish operations
Notes: Includes bibliographical references.
This edition was published in 1989



Filesize: 43.25 MB

Tags: [#\[PDF\]](#) [#Numerical](#) [#and](#) [#physical](#) [#modelling](#) [#of](#) [#tundish](#) [#slag](#) [#entrainment](#) [#in](#) [#the](#) [#steelmaking](#) [#process](#)

[PDF] Modeling study of intermixing in tundish and strand during a continuous

Induction heating in tundish may be employed to correct melt temperature. Another popular type of fixed oscillating mold caster is the vertical and bending type caster, in which the mold and support rolls are arranged vertically so as to maximize the chances for inclusions to float out of the deep sump of molten steel, rather than being trapped in the upper solidifying shell. Report, in Japanese, 1994, vol.

[PDF] Numerical and physical modelling of tundish slag entrainment in the steelmaking process

Then, due to their buoyancy, they rise almost straight back up to the surface, forming a bubble plume within the tundish around the ladle shroud.

Physical and Mathematical Modelling of Steelmaking Tundish Operations: A Review of the Last Decade (1999)

He has to his credit more than 300 publications and has won several awards and honors including the Brimacombe Award, the Berkeley Citation, and the Douglas Gold Medal of Advances in Mechanical Engineering.

Tundish

This is a significant portion of the casting time during which the metal flow is in a reverse mode. This behavior is the reverse of that observed under steady-state conditions. Water is the preferred atomizing medium for producing copper and copper alloy powders.

Tundish

The metal stream from the ladle, especially when it is shrouded and has no entrained gas, enters into the tundish at a very high velocity and turbulence. Metallurgical and Materials Transactions B, 31 1, 63-74. The copper mold is water-cooled and the bottom of the mold is initially sealed by a dummy bar of steel.

Modeling of Steelmaking Processes

For symmetry reasons, only one quarter of the tundish was modeled. Three variants of subflux controller of turbulence configurations in the tundish are tested. The free surface of the melt in tundish is typically covered by slag to avoid reoxidation and heat losses from the melt.

The Physical and Mathematical Modeling of Tundish Operations

The continuous casting process is shown in Figure 1.

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The depth of penetration of the bubble column varies with the volume fraction of gas injected.

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