

Mold Fluid Flow

Investigation of Refractory Properties on the Initial Bubble Behavior in the Water Model of Continuous Casting Process Go-Gi Lee, Seon-Hyo Kim, and Brian G. Thomas

**Differences between Physical Water Models and Steel Continuous Casters: A Theoretical Evaluation** R. Chaudhary, B. T. Rietow, and B. G. Thomas

State of the Art in Electromagnetic Flow Control in Continuous Casting of Steel Slabs: Modeling and Plant Validation B.G. Thomas, and R. Chaudhary

Direct Numerical Simulations of Magnetic Field Effects on Turbulent Duct Flows

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R. Chaudhary, S.P. Vanka, and B.G. Thomas



**Initial Solidification** 

University of Illinois at Urbana-Champaign

# Thermal-Mechanical Behaviour during Initial Solidification in Continuous Casting: Steel Grade Effects

J. Sengupta, C. Ojeda and B. G. Thomas Int. J. Cast Metals Research, V. 22, No. 1-4, 2009, pp. 8-14

## Prediction and control of subsurface hooks in continuous cast ultra-low-carbon steel slabs

Lee, G.G, H.-J. Shin, S.-H. Kim, S.-K. Kim, W.-Y. Choi, and B.G. Thomas Ironmaking and Steelmaking, 36: <u>1</u>, 39-49, 2009.

Heat Transfer

# Investigating Heat Transfer In Funnel-Mould Casting With CON1D: Effect of Plate Thickness

Santillana, B., L.C. Hibbeler, B.G. Thomas, A. Hamoen, A. Kamperman, W. van der Knoop

ISIJ International, 48:10, 1380-1388, 2008

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# Utilization of CON1D at ArcelorMittal Dofasco's No. 2 Continuous Caster for Crater End Determination

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**Online Dynamic Control of Cooling in Continuous Casting of Thin Steel Slabs** Thomas, B. G., J. Bentsman, B. Petrus, S. Vapalahti, H. Li, A. H. Castillejos, and F. A. Acosta

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# Real-Time Model-Based Spray-Cooling Control System for Steel Continuous Casting

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Bryan Petrus, Kai Zheng, Brian G. Thomas, Joseph Bentsman



Stress and Cracks

University of Illinois at Urbana-Champaign

Analytical Prediction of Funnel Mold Bending Effect and Hot Tearing Susceptibility Hibbeler, L.C., B.G. Thomas

Explicit Coupled Thermo-Mechanical Finite-Element Model of Continuous Casting of Steel in Funnel Molds

Seid Koric, Lance C. Hibbeler, and Brian G. Thomas Modeling of Casting, Welding and Advanced Solidification Processes XII, Vancouver, Canada, June 7-14, 2009, TMS, Warrendale, PA, 2009

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### Thermo-Mechanical Modeling of Beam Blank Casting

Lance C. Hibbeler, Seid Koric, Kun Zhu, Brian G. Thomas, and Clayton Spangler

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#### Prediction of Grain Size, Precipitation, and Crack Susceptibility in Continuous Casting

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#### Longitudinal Face Crack Prediction with Thermo-Mechanical Models of Thin Slabs in Funnel Moulds

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**Computational Modeling** 

### Industry Implementation of Mathematical Models: Examples in Steel Processing; Howe Memorial Lecture, 2009

B. G. Thomas

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