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主要研究方向

金属充型凝固过程中传热、传质及流动数值模拟及缺陷预测

金属凝固过程铸造热应力及形变数值模拟及热裂预测

合金凝固微观组织数值模拟

高温合金精密铸造技术

高温合金空心叶片陶瓷型芯制备技术

社会兼职

哈尔滨工业大学先进材料特种凝固加工研究所 副总工程师

哈尔滨市铸造学会 理事

主要学术成果

1. **Xue Xiang** and Tang Jinjun. Numerical simulation of boundary heat flow effects on directional solidification microstructure of a binary alloy. *China Foundry*, 2010, vol.7, No.3, 253~258
2. Tang J, **Xue X**. Numerical simulation of multi-grain structure and prediction of microsegregation in binary Ni-Cu alloy under isothermal conditions. *Materials Science and Engineering A-Structural Materials Properties Microstructure and Processing*. 2009, 499(1-2): 64-68
3. **Xue X**, Xu L. Numerical simulation and prediction of solidification structure and mechanical property of a superalloy turbine blade. *Materials Science and Engineering A-Structural Materials Properties Microstructure and Processing*. 2009, 499(1-2): 69-73
4. Jinjun Tang, **Xiang Xue**. Phase-field Simulation of Directional Solidification of a Binary Alloy under Different Boundary Heat Flux Conditions. *Journal of Materials Science*, v44, n3, 2009:745-753
5. **XUE Xiang**, ZHAO Xuemei. Numerical Simulation of Semi-solid Mould Filling Using SOLA-VOF Technique. *Journal of Wuhan University of Technology – Materials Science*, 2009, Sum 89, Vol. 24, Suppl.:221~225
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15. **Xue X et al**. Modification and Improvement of Shrinkage Porosity Criterion for Steel Castings. *Proceedings of 1st International Conference on New Forming Technology*, Sep.6~9, 2004, Harbin, China, 519~524
16. **Xue X**, Li H W. Influence of pressure on shrinkage porosity prediction. *Transactions of Nonferrous Metals Society Of China*. 2005, v15(Special 2): 217-221
17. **Xue X**, Tian J, Xiu G M. Numerical Simulation of Thermal Stress in Castings Using FDM/FEM Integrated Method, *Materials Science Forum*, Vols.490-491, July 2005, pp85~90
18. **Xue X**, Xu L. Effects of solidification parameters on microstructure and mechanical property of a Ni-based superalloy K35 blade. *Rare Metals*. 2007, 26: 274-279
19. **Xue X**, Tang J J. Numerical simulation of microstructure and microsegregation in Ni-Cu alloy under isothermal condition. *Journal of Materials Science & Technology*. 2008, 24(3): 391-394
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