

ISSN 1672-6421  
CN 21-1498 / TG

# CHINA FOUNDRY

中国铸造

Vol.11 No.1 January 2014



1672-6421



01>

9 771672 642003

Published by FOUNDRY JOURNAL AGENCY

P. R. China

万方数据

# CONTENTS

Vol.11 No.1 January 2014

## Research/& Development

- 1 Pore structure and mechanical properties of directionally solidified porous aluminum alloys  
*Komissarchuk Olga, Xu Zhengbin, Hao Hai, et al*
- 8 Effect of abruptly changing withdrawal rate on solidification microstructure in directionally solidified Al-4.5wt%Cu alloy  
*Yang Luyan, Li Shuangming, Zhong Hong, et al*
- 14 Effect of centrifugal counter-gravity casting on solidification microstructure and mechanical properties of A357 aluminum alloy  
*Li Xinlei, Hao Qitang, Miao Xiaochuan, et al*
- 20 Geometric analysis of investment casting turbine blades based on digital measurement data  
*Cheng Yunyong, Wang Liya, Zhu Zhenzhen, et al*
- 28 Effects of Sm addition on microstructure and mechanical properties of a Mg-10Y alloy  
*Li Quanan, Zhang Qing, Wang Yaogui, et al*
- 33 Inhomogeneity of microstructure and mechanical properties of a 500 mm diameter heavy section semi-continuous cast AZ61 magnesium alloy ingot  
*Peng Jian, Tao Jianquan, Tong Xiaoshan, et al*
- 39 Effect of homogenizing treatment on microstructure and conductivity of 7075 aluminum alloy prepared by low frequency electromagnetic casting  
*Wang Gaosong, Zhao Zhihao, Guo Qiang, et al*
- 46 Formation mechanism of shrinkage and large inclusion of a 70 t 12Cr2Mo1 heavy steel ingot  
*Liu Hongwei, Fu Paixian, Kang Xiuhong, et al*
- 52 Numerical simulation on multiple pouring process for a 292 t steel ingot  
*Tu Wutao, Zhang Xiong, Shen Houfa, et al*

## Information

- 59 Introduction to patents
- 61 FICMES delegation attends AFC-12 and annual meeting of Taiwan Foundry Society
- 63 The award ceremony and recipients of the Third "China Foundry Lifetime Achievement Award" and "China Foundry Outstanding Contribution Award"
- 69 Industry News
- 71 Titles of papers published in Foundry journal
- 75 The 1st International Symposium on Nonferrous Alloys and Special Casting Technologies — Call for Papers
- 76 China Foundry Industry Engineering Research Center for Wear Resistant Materials
- 78 Preliminary programme of 71st WFC

## Advertisements

### Inside Front Cover, A1

Suzhou Xingye Materials Technology Co., Ltd.  
Suzhou Xingye Chemicals Co., Ltd.

### Inside Back Cover CHINA DIECASTING 2014

### Back Cover

The 1st International Symposium on Nonferrous Alloys and Special Casting Technologies

- A2 A New Year's Message from the New Editor-in-Chief  
A3 Illustration for Front Cover  
B1 Metal China 2014  
B2-B3 Foundry Journal Agency  
B4 Shenyang Research Institute of Foundry



# **THE 1<sup>ST</sup>** **INTERNATIONAL SYMPOSIUM ON NONFERROUS ALLOYS AND SPECIAL CASTING TECHNOLOGIES (ISNASCT-1)**

**JULY 2014 | SHANGHAI CHINA**

**The 9th China International Diecasting Congress & Exhibition  
will be held concurrently.**

**ORGANIZERS**

Chinese Mechanical Engineering Society (CMES)

Nonferrous Materials Commission of the World Foundry Organization

Die Casting Commission of the World Foundry Organization

**CO-ORGANIZER**

Foundry Journal Agency

**SUPPORT MEDIA**

CHINA FOUNDRY journal

**TOPICS OF THE SYMPOSIUM**

For details, see the content of China Foundry.

**CONTACT US**

Mr. Pan Jiyong

E-mail: ISNASCT\_FJA@163.com

Fax: 024-25611880

