

**Proceedings of The 11th International Conference on
Semi-Solid Processing of Alloys and Composites (Part A)**

CONTENTS

Material Development and Alloy Design

- Effect of Si, Cu and Fe on mechanical properties of cast semi-solid 206 alloys
.....A. LEMIEUX, J. LANGLAIS, D. BOUCHARD, X. GRANT CHEN(1555)
- Compcasting of A356-CNT composite.....B. ABBASIPOUR, B. NIROUMAND, S. M. MONIR VAGHEFI(1561)
- Recycling of minute metal scraps by semisolid processing: Manufacturing of design materials
.....S. SUGIYAMA, T. MERA, J. YANAGIMOTO(1567)
- Commercial AM60 alloy for semisolid processing: Alloy optimization and thermodynamic analysis
.....LI Yuan-dong, D. APELIAN, XING Bo, MA Ying, HAO Yuan(1572)

Microstructure and Properties

- Observation of interface of two kinds of bi-metal composite parts prepared by thixo-forging
.....YANG Zhao, ZHOU Li, DONG Jian-xiong(1579)
- Microstructure evolution during reheating of extruded Mg-Gd-Y-Zr alloy into semisolid state
.....GAO Lei, LIANG Song-mao, CHEN Rong-shi, HAN En-hou(1585)
- New method of direct chill casting of Al-6Si-3Cu-Mg semisolid billet by annulus electromagnetic stirring
.....TANG Meng-ou, XU Jun, ZHANG Zhi-feng, BAI Yue-long(1591)
- Tensile properties of as-deformed 2A50 aluminum alloy in semi-solid state
.....DU Zhi-ming, CHEN Gang, LIU Jun, XIE Shui-sheng(1597)
- Microstructure and properties of high silicon aluminum alloy with 2%Fe prepared by rheo-casting
.....ZHONG Gu, WU Shu-sen, AN Ping, MAO You-wu, LI Shi-zhao(1603)
- Microstructure and mechanical properties of A356 thixoformed alloys in comparison with gravity cast ones
using new criterion.....A. FADAVI BOOSTANI, S. TAHAMTAN(1608)
- Microstructural evolution during partial remelting of AM60B magnesium alloy refined by MgCO₃
.....CHEN Ti-jun, MA Ying, WANG Rui-quan, LI Yuan-dong, HAO Yuan(1615)
- Microstructure of partially remelted billet of AM60 alloy prepared with self-inoculation method
.....XING Bo, LI Yuan-dong, MA Ying, CHEN Ti-jun, HAO Yuan(1622)
- Microstructure and tensile properties of AM50A magnesium alloy prepared by recrystallisation and partial melting
processZHAO Zu-de, CHEN Qiang, HUANG Shu-hai, KANG Feng, WANG Yan-bin(1630)
- Rheological characterization of A201 aluminum alloy
.....A. BLANCO, Z. AZPILGAIN, J. LOZARES, P. KAPRANOS, I. HURTADO(1638)
- Effect of sodium modification on microstructure and mechanical properties of thick-walled AlSi6Cu2.5 rheocast
componentM. WESSÉN, N. E. ANDERSSON, O. GRANATH(1643)
- Evolution of microstructure in semi-solid slurries of rheocast aluminum alloy
.....R. CANYOOK, S. PETSUT, S. WISUTMETHANGOON, M. C. FLEMINGS, J. WANNASIN(1649)
- Inconel 617 and Stellite 6 alloys for tooling in thixoforming of steels.....Y. BIROL(1656)
- Microstructural evolution during semisolid state strain induced melt activation process of aluminum 7075 alloy
.....A. BOLOURI, M. SHAHMIRI, E. N. H. CHESHMEH(1663)
- Coarsening rate of microstructure in semi-solid aluminium alloys.....H. V. ATKINSON, D. LIU(1672)
- Taper barrel rheomoulding process for semi-solid slurry preparation and microstructure evolution of A356 aluminum
alloyZHANG Fan, KANG Yong-lin, YANG Liu-qing, DING Rui-hua(1677)
- Microstructure refinement of AZ31 alloy solidified with pulsed magnetic field
.....WANG Bin, YANG Yuan-sheng, SUN Ming-li(1685)

Rheology, Modelling and Simulation

- Analysis of semi-solid response under rapid compression tests using multi-scale modelling and experiments
.....V. FAVIER, H. ATKINSON(1691)
- Modeling of shear induced coarsening effects in semi-solid alloys.....M. MODIGELL, A. POLA(1696)
- Evaluation of pitting corrosion of thixoformed A356 alloy using a simulation model
.....S. TAHAMTAN, A. FADAVI BOOSTANI(1702)
- Numerical simulation on thixoforging of electronic packaging shell with SiC_p/A356 composites
.....WANG Kai-kun, WANG Fu-yu, CHEN Xue-jun, WANG Lu, MA Chun-mei(1707)

Process Development

- Conception of tooling adapted to thixoforging of high solid fraction hot-crack-sensitive aluminium alloys
.....G. VANEETVELD, A. RASSILI, J. C. PIERRET, J. LECOMTE-BECKERS(1712)
- Semi-solid near-net shape rheocasting of heat treatable wrought aluminum alloys.....U. A. CURLE(1719)
- Deformation mechanism and forming properties of 6061Al alloys during compression in semi-solid state
.....SHANG Shu-zhen, LU Gui-min, TANG Xiao-ling, ZHAO Zu-xin, WU Cheng-ming(1725)
- Preparation and thixoforging of semisolid billet of AZ80 magnesium alloy
.....JIANG Ju-fu, WANG Ying, QU Jian-jun, DU Zhi-ming, LUO Shou-jing(1731)
- Damage prediction for magnesium matrix composites formed by Liquid-solid extrusion process based on
finite element simulation.....QI Le-hua, LIU Jian, GUAN Jun-tao, SU Li-zheng, ZHOU Ji-ming(1737)
- Semi-solid processing of hypereutectic A390 alloys using novel rheoforging process
.....M. TEBIB, J. B. MORIN, F. AJERSCH, X. GRANT CHEN(1743)
- Shear band formation in shaped rheocast aluminium component at various plunger velocities
.....M. BLADH, M. WESSÉN, A. K. DAHLE(1749)
- Feasibility of semi-solid die casting of ADC12 aluminum alloy
.....S. JANUDOM, T. RATTANOCHAIKUL, R. BURAPA, S. WISUTMETHANGOON, J. WANNASIN(1756)
- Development of aluminum rheo-extrusion process using semi-solid slurry at low solid fraction
.....T. RATTANOCHAIKUL, S. JANUDOM, N. MEMONGKOL, J. WANNASIN(1763)
- Rheo-squeeze casting of semi-solid A356 aluminum alloy slurry.....MAO Wei-min, ZHENG Qiu, ZHU Da-ping(1769)

Industrial Applications & Others

- Semisolid lead-antimony alloys for cars batteries.....A. POLA, M. GELFI, M. MODIGELL, R. ROBERTI(1774)
- Application of shortened heat treatment cycles on A356 automotive brake calipers with respective globular
and dendritic microstructures.....H. MÖLLER, G. GOVENDER, W. E. STUMPF(1780)
- High-quality aluminum turbocharger impellers produced by thixocasting
.....G. WALLACE, A. P. JACKSON, S. P. MIDSON, Q. ZHU(1786)
- Semisolid joining of aluminum A356 alloy by partial remelting and mechanical stirring
.....S. M. J. ALVANI, H. AASHURI, A. KOKABI, R. BEYGI(1792)
- Numerical simulation and experimental study for rheo-forged component using direct and indirect die system
.....H. H. KIM, C. G. KANG(1799)
- Theory and application research development of semi-solid forming in China
.....LUO Shou-jing, W. C. KEUNG, KANG Yong-lin(1805)

Editorial Committee of Transactions of Nonferrous Metals Society of China.....(Inside front cover)

Information for Contributors.....(Inside back cover)

Managing Editors: YUAN Sai-qian, LI Xiang-qun

Serial parameter: CN43—1239/TG*1991*m*A4*260*en*P*\$50.00*1000*41*2010-09