

Journal of Iron and Steel Research International

钢铁研究学报(英文版)



中国钢研科技集团有限公司
CHINA IRON & STEEL RESEARCH INSTITUTE GROUP



Springer

Journal of Iron and Steel Research International

Volume 28 · Number 2 · February 2021

REVIEW

New insight into fabrication of shaped Mg-X alloy foams with cellular structure via a gas release reaction powder metallurgy route

H. Wang · D.F. Zhu · Y. Wu · X.J. Liu · S.H. Jiang · T.G. Nieh · Z.P. Lu 125

ORIGINAL PAPERS

Effects of PbO poisoning on Ce-Mn/AC catalyst for low-temperature selective catalytic reduction of NO with NH₃

Z.H. Su · S. Ren · T.S. Zhang · J. Yang · Y.H. Zhou · L. Yao 133

Effects of pressure and plastic addition on sticking of fine iron ore particles in fluidized bed reduction

Q.Y. Xu · Z.H. Gu · Z.P. Li · Y.Y. Zhang · H.C. Wang 140

Effect of a self-rotating oxygen lance system on mass transfer between slag and molten steel

Q. Gao · W. Wu · J.G. Zhi · B. Zhang · X.C. Li 152

Comparison and integration of final electromagnetic stirring and thermal soft reduction on continuous casting billet

Y.S. Han · W. Yan · J.S. Zhang · J. Chen · W.Q. Chen · Q. Liu 160

Dynamics-based optimization of rolling schedule aiming at dual goals of chatter suppression and speed increase for a 5-stand cold tandem rolling mill

Z.Y. Gao · B. Tian · Y. Liu · L.Y. Zhang · M.L. Liao 168

Microstructure, phase composition and wear resistance of low valence electron concentration Al_xCoCrFeNiSi high-entropy alloys prepared by vacuum arc melting

B.Q. Jin · N.N. Zhang · Y. Zhang · D.Y. Li 181

Effect of Zr-deoxidation on microstructure and mechanical behavior of microalloyed heavy plates with low impurity content

C.Y. Hu · H.Y. Dong · K.M. Wu · R.D.K. Misra · L. Zhong · X. Jin · Q. Li 190

Influence of varying forms of bionic units on repairing remaining quenching surface of gray cast iron

H. Li · L. Feng · H. Zhou · P. Zhang · T. Zhou · Q. Sui · L.Q. Ren 201

Effect of vanadium on hydrogen embrittlement susceptibility of high-strength hot-stamped steel

W.J. Chen · P.F. Gao · S. Wang · H.Z. Lu · Z.Z. Zhao 211

Effect of multiple heat treatments on fracture property of centrifugal casting stainless steels Z3CN20.09M with long-term thermal aging degradation

M.Y. Fan · W.Q. Jia · W.W. Yu · D.Y. Wang · M. Guan · Y. Cao · F. Xue · Y.L. Liu · J.W. Yao · B. Lin · T. Yu 223

Clarifying effect of welding conditions on microstructure and mechanical properties of friction stir spot-welded DH590 automotive high-strength steel plates

Y.P. Zhao · L.F. Chen · S.J. Zhu · Y.F. Sun · S.K. Guan 232

High-temperature deformation behaviour of duplex stainless steel with hard boronised layer

N.M. Sultan · I. Jauhari · R. Saidan · M.F.M. Sabri 244

Further articles can be found at link.springer.com

Indexed/abstracted in *Current contents (ISI)*, *Index Medicus/Medline*, *Chemical Abstracts*, *Bioscience Information Service (BIOSIS)*, *CAS*, *METADEx*, *INSPEC*, *Science Citation Index*, *Ei Compendex*

Instructions for Authors for *J. Iron Steel Res. Int.* are available at www.springer.com/42243

Journal of Iron and Steel Research International

Volume 28 · Number 2 · February 2021

REVIEW

New insight into fabrication of shaped Mg-X alloy foams with cellular structure via a gas release reaction powder metallurgy route

H. Wang · D.F. Zhu · Y. Wu · X.J. Liu · S.H. Jiang · T.G. Nieh · Z.P. Lu 125

ORIGINAL PAPERS

Effects of PbO poisoning on Ce-Mn/AC catalyst for low-temperature selective catalytic reduction of NO with NH₃

Z.H. Su · S. Ren · T.S. Zhang · J. Yang · Y.H. Zhou · L. Yao 133

Effects of pressure and plastic addition on sticking of fine iron ore particles in fluidized bed reduction

Q.Y. Xu · Z.H. Gu · Z.P. Li · Y.Y. Zhang · H.C. Wang 140

Effect of a self-rotating oxygen lance system on mass transfer between slag and molten steel

Q. Gao · W. Wu · J.G. Zhi · B. Zhang · X.C. Li 152

Comparison and integration of final electromagnetic stirring and thermal soft reduction on continuous casting billet

Y.S. Han · W. Yan · J.S. Zhang · J. Chen · W.Q. Chen · Q. Liu 160

Dynamics-based optimization of rolling schedule aiming at dual goals of chatter suppression and speed increase for a 5-stand cold tandem rolling mill

Z.Y. Gao · B. Tian · Y. Liu · L.Y. Zhang · M.L. Liao 168

Microstructure, phase composition and wear resistance of low valence electron concentration Al_xCoCrFeNiSi high-entropy alloys prepared by vacuum arc melting

B.Q. Jin · N.N. Zhang · Y. Zhang · D.Y. Li 181

Effect of Zr-deoxidation on microstructure and mechanical behavior of microalloyed heavy plates with low impurity content

C.Y. Hu · H.Y. Dong · K.M. Wu · R.D.K. Misra · L. Zhong · X. Jin · Q. Li 190

Influence of varying forms of bionic units on repairing remaining quenching surface of gray cast iron

H. Li · L. Feng · H. Zhou · P. Zhang · T. Zhou · Q. Sui · L.Q. Ren 201

Effect of vanadium on hydrogen embrittlement susceptibility of high-strength hot-stamped steel

W.J. Chen · P.F. Gao · S. Wang · H.Z. Lu · Z.Z. Zhao 211

Effect of multiple heat treatments on fracture property of centrifugal casting stainless steels Z3CN20.09M with long-term thermal aging degradation

M.Y. Fan · W.Q. Jia · W.W. Yu · D.Y. Wang · M. Guan · Y. Cao · F. Xue · Y.L. Liu · J.W. Yao · B. Lin · T. Yu 223

Clarifying effect of welding conditions on microstructure and mechanical properties of friction stir spot-welded DH590 automotive high-strength steel plates

Y.P. Zhao · L.F. Chen · S.J. Zhu · Y.F. Sun · S.K. Guan 232

High-temperature deformation behaviour of duplex stainless steel with hard boronised layer

N.M. Sultan · I. Jauhari · R. Saidan · M.F.M. Sabri 244

Further articles can be found at link.springer.com

Indexed/abstracted in *Current contents (ISI)*, *Index Medicus/Medline*, *Chemical Abstracts*, *Bioscience Information Service (BIOSIS)*, *CAS*, *METADEx*, *INSPEC*, *Science Citation Index*, *Ei Compendex*

Instructions for Authors for *J. Iron Steel Res. Int.* are available at www.springer.com/42243