



Q K 1 8 3 6 2 8 7

ISSN 1007-2012

CN 11-3449/TG

CODEN SGXUFE

塑性工程学报

JOURNAL OF PLASTICITY ENGINEERING

3

2018 Vol.25

万方数据

中国科学技术协会主管
中国机械工程学会主办

塑性工程学报

SUXING GONGCHENG XUEBAO

第 25 卷 第 3 期 2018 年 6 月 28 日

目 次

塑性成形技术与工艺

- | | | |
|-------------------------------------|-------|------------------------|
| 某电动汽车前舱轻量化设计 | ..... | 谢晖, 王品健, 王杭燕 (1) |
| 基于 Nakajima 试验的 6061-T6 铝合金胀形回弹规律研究 | ..... | 耿平, 宋燕利, 周瀑, 等 (8) |
| 船用薄板柔性渐进成形工艺数值模拟及实验研究 | ..... | 邱海渊, 于沪平, 乔云, 等 (16) |
| 均匀网格壁板三点弯曲过程的有限元分析与试验研究 | ..... | 韩磊, 孙良杰, 王龙, 等 (23) |
| 基于灰色系统理论的隔热件成形优化 | ..... | 薛克敏, 吴超, 郭威威, 等 (30) |
| 四辊卷板多道次滚弯成形建模与工艺参数分析 | ..... | 周迟, 孙宇, 武凯, 等 (35) |
| AZ31 镁合金挤压型材温热张力绕弯成形模拟及实验研究 | ..... | 肖寒, 曾文文, 程明, 等 (42) |
| 面积扩展比对铜棒材连续挤压扩展成形流动的影响 | ..... | 王跟浩, 远新兵, 裴久杨, 等 (47) |
| 超声滚挤压轴承套圈表面粗糙度响应曲面预测模型 | ..... | 王晓强, 荣莎莎, 刘佳, 等 (54) |
| 外锥内直孔件开式冷挤压成形理论建模研究 | ..... | 韩鹏彪, 马磊, 李军, 等 (60) |
| 铝型材拉弯成形工艺稳健性优化 | ..... | 王贺, 黄霞, 孙莹, 等 (65) |
| 薄壁毂齿形径向成形工艺研究 | ..... | 高文静, 雷君相, 郭丰伟 (73) |
| TB5 钛合金凸弯边橡皮成形简化模型及成形极限研究 | ..... | 孙永娜, 万敏, 吴向东, 等 (81) |
| 加载条件对铸态 7075 铝合金筒形件强力热反旋鼓包的影响 | ..... | 赵刚要, 赵盼, 张冉阳, 等 (88) |
| 基于 ABAQUS 连杆衬套强力旋压残余应力研究 | ..... | 杨锋, 樊文欣, 李涵, 等 (96) |
| 基于 Simufact 不同旋轮参数下强力反旋连杆衬套成形质量的研究 | ..... | 汤传尧, 樊文欣, 尹馨妍 (102) |
| 钢管斜连轧工艺参数对轧制力及荒管尺寸精度的影响 | ..... | 毛飞龙, 双远华, 王清华, 等 (108) |
| AZ31 镁合金无缝管斜轧穿孔数值模拟 | ..... | 郭拉凤, 安晓红, 卢利权, 等 (115) |
| 基于 MPSO-BP 模型的小半径弯管成形结果快速预测 | ..... | 赵阳, 刘俊, 唐文勇, 等 (122) |
| 冷滚打花键表层加工硬化双响应曲面 - 满意度函数的优化分析 | ..... | 崔凤奎, 苏涌翔, 王晓强, 等 (129) |
| 材料及滚压方式对等壁厚螺杆钻具定子滚压成形的影响 | ..... | 祝效华, 纪文, 刁飞, 等 (136) |
| AA5052 自冲铆接头成形质量及其静力学性能研究 | ..... | 余康, 邢保英, 何晓聪, 等 (143) |

- 基于包辛格效应的变形拨叉超声振动矫正分析 刘飞飞, 熊康太, 高堂盼, 等 (148)
5182Al/HC340LA 异种金属件磁脉冲焊接数值模拟与试验验证 李光耀, 陈侣侣, 耿辉辉, 等 (155)

材料性能与变形理论

- 往复挤压对高硅铝合金组织及性能影响 李萍, 吴广善, 王薄笑天, 等 (163)
双轴加载下变形镁合金各向异性硬化模型研究 杨冲, 石宝东, 彭艳, 等 (168)
A356.2 铝合金高温拉伸本构行为研究 饶国举, 李新和, 孙晓冬, 等 (174)
交叉轧制对 ZK60 镁合金组织演变和性能的影响 李奇, 陈忠家, 王雪英, 等 (181)
泡沫铝准静态压缩变形的声发射特征研究 张磊, 石健, 李成兵, 等 (189)
大型轧辊 Cr5 合金钢热压缩过程微观组织演变元胞自动机模拟 陈学文, 张亚东, 皇涛, 等 (195)
应力状态对无取向电工钢塑性变形和断裂行为的影响 朱奕伟, 阎秋生, 路家斌 (201)
应力控制下的 Q345 钢疲劳寿命预测研究 刘曦程, 刘光连, 聂振超, 等 (212)
基于沙钢推拉式酸洗线开发免平整酸洗板 SPHC 岳重祥, 李慧, 吴圣杰, 等 (217)
超高强钢辊压门槛零件切断模具磨损优化设计研究 张骥超, 韩非, 黎聪, 等 (224)
金属板料塑性应变比的影响因素分析 李娟, 王辉, 严大伟 (229)
基于有限元反求的热拉弯成形界面接触换热系数研究 邓同生, 李东升, 李小强, 等 (235)
泡沫金属夹层对压印 - 粘接复合接头力学性能的影响 初明明, 何晓聪, 雷蕾, 等 (242)
粘接剂对三明治结构自冲铆接头力学性能的影响 丁文有, 何晓聪, 刘洋, 等 (248)
低应力下料中棒料 V 型槽应力集中系数的计算 张立军, 张德培, 周树恩, 等 (254)
基于 ABAQUS 的 X80 压力管道裂纹扩展研究 倪扬, 马廷霞, 刘维洋 (261)
含内腐蚀凹陷的压力管道应力应变研究 马欣, 李杰, 薛涛, 等 (267)
冷轧支承辊辊套内外表面应力分布及其影响因素研究 董永刚, 宋剑锋, 朱衡, 等 (274)
斜轧穿孔机顶杆弯曲挠度及临界失稳力计算分析 庞玉华, 王杨, 刘东, 等 (282)

成形装备与智能制造

- 基于 PSO 和 DE 优化算法的热轧工作辊热辊形的研究 杨金光, 孙丽荣, 刘华强, 等 (289)
宝钢无缝钢管张力减径有限元模拟与验证 王超峰, 胡斌斌, 杜凤山 (297)

· 消息 ·

- 《塑性工程学报》关于参考文献著录格式的要求 (22)
欢迎订阅《塑性工程学报》杂志 (29)
扫一扫关注塑性工程学报 (80)
《塑性工程学报》关于论文学术不端的认定及处理办法 (142)

(责任编辑: 周林 秦思晓)

JOURNAL OF PLASTICITY ENGINEERING

(SUXING GONGCHENG XUEBAO)

Vol. 25 No. 3 Jun. 28 2018

Contents

Plasticity Forming Technology and Process

- Lightweight design for an electric vehicle front cabin XIE Hui, WANG Pin-jian, WANG Hang-yan (1)
Research on bulging springback of AA6061-T6 based on Nakajima test GENG Ping, SONG Yan-li, ZHOU Pu, et al (8)
Numerical simulation and experimental research on flexible incremental forming method of marine plate QIU Hai-yuan, YU Hu-ping, QIAO Yun, et al (16)
Finite element analysis and experimental research of three-point bending process for uniform mesh panels HAN Lei, SUN Liang-jie, WANG Long, et al (23)
Forming optimization of insulation parts based on grey system theory XUE Ke-min, WU Chao, GUO Wei-wei, et al (30)
Modeling and analysis of process parameters in multi-pass four-roll bending ZHOU Chi, SUN Yu, WU Kai, et al (35)
Numerical simulation and experimental study on warm tension-rotation bending of AZ31 magnesium alloy as-extruded profile XIAO Han, ZENG Wen-wen, CHENG Ming, et al (42)
Effects of area expansion ratio on flow of copper bar during continuous extrusion expansion forming WANG Gen-hao, YUN Xin-bing, PEI Jiu-yang, et al (47)
Surface roughness response prediction model of ultrasonic roll extrusion bearing ring WANG Xiao-qiang, RONG Sha-sha, LIU Jia, et al (54)
Theoretical modeling of open-die cold extrusion of conical workpiece with straight hole HAN Peng-biao, MA Lei, LI Jun, et al (60)
Study on process robust optimization for stretch bending of aluminum profile WANG He, HUANG Xia, SUN Ying, et al (65)
Research on radial forming process of thin-walled hub tooth GAO Wen-jing, LEI Jun-xiang, GUO Feng-wei (73)
Simplified model and forming limit research of convex flange rubber forming for TB5 titanium alloy SUN Yong-na, WAN Min, WU Xiang-dong, et al (81)
Effect of loading condition on the bulge during hot power backward spinning for casting 7075 aluminum alloy tube ZHAO Gang-yao, ZHAO Pan, ZHANG Ran-yang, et al (88)
ABAQUS based residual stress analysis of connecting rod bushing in power spinning YANG Feng, FAN Wen-xin, LI Han, et al (96)
Forming quality study of power backspinning connecting rod bushing under different rotating wheel parameters based on Simufact TANG Chuan-yao, FAN Wen-xin, YIN Xin-yan (102)
Effect of process parameters on rolling force and dimensional precision of tubes rolled by tandem skew rolling process MAO Fei-long, SHAUNG Yuan-hua, WANG Qing-hua, et al (108)
Numerical simulation of cross piercing of AZ31 magnesium alloy seamless tube GUO La-feng, AN Xiao-hong, LU Li-quan, et al (115)
Rapid prediction of small radius bending forming results based on MPSO-BP model ZHAO Yang, LIU Jun, TANG Wen-yong, et al (122)
Analysis on optimization of double-response surface-satisfaction function of surface work-hardening for cold roll-beating spline CUI Feng-kui, SU Yong-xiang, WANG Xiao-qiang, et al (129)
Influences of material and rolling method on roll forming of iso-wall thickness screw drilling stator ZHU Xiao-hua, JI Wen, DIAO Fei, et al (136)

- Study on forming quality and static performance of AA5052 self-piercing riveting joint YU Kang, XING Bao-ying, HE Xiao-cong, et al (143)
 Anslysis of ultrasonic vibration correction of deformed fork based on Bauschinger effect LIU Fei-fei, XIONG Kang-tai, GAO Tang-pan, et al (148)

Material Performance and Deformation Theory

- Numerical simulation and experimental verification of magnetic pulse welding for dissimilar metal parts 5182Al/HC340LA LI Guang-yao, CHEN Lü-lü, GENG Hui-hui, et al (155)
 Study on microstructure and properties of high silicon aluminum alloy by cyclic extrusion compression LI Ping, WU Guang-shan, WANG Bo-xiao-tian, et al (163)
 Anisotropic hardening model for wrought Mg alloys under biaxial loading YANG Chong, SHI Bao-dong, PENG Yan, et al (168)
 Study on tensile constitutive behavior of A356.2 aluminum alloy at elevated temperature RAO Guo-ju, LI Xin-he, SUN Xiao-dong, et al (174)
 Effects of cross rolling on microstructure evolution and properties of ZK60 magnesium alloy LI Qi, CHEN Zhong-jia, WANG Xue-ying, et al (181)
 Study on acoustic emission characteristics of quasi-static compression for aluminum foam ZHANG Lei, SHI Jian, LI Cheng-bing, et al (189)
 Simulation of microstructure evolution of Cr5 alloy steel for large roller during hot compression process using cellular automaton method CHEN Xue-wen, ZHANG Ya-dong, HUANG Tao, et al (195)
 Effect of stress state on deformation and fracture behavior of non-oriented electrical steel ZHU Yi-wei, YAN Qiu-sheng, LU Jia-bin (201)
 Study on fatigue life prediction of Q345 steel under stress control LIU Xi-cheng, LIU Guang-lian, NIE Zhen-chao, et al (212)
 Development of SPHC pickling plate without temper rolling based on the push-pull pickling line of Shasteel group YUE Chong-xiang, LI Hui, WU Sheng-jie, et al (217)
 Study on the optimization design of punching die wear of roll-formed ultra-high strength steel rocker profile ZHANG Ji-chao, HAN Fei, LI Cong, et al (224)
 Analysis of factors affecting the plastic strain ratio of sheet metal LI Juan, WANG Hui, YAN Da-wei (229)
 TCC coefficient for hot stretch bending using FE-based reverse method DENG Tong-sheng, LI Dong-sheng, LI Xiao-qiang, et al (235)
 Effect of foam metal sandwich on mechanical properties of clinch-bonded hybrid joint CHU Ming-ming, HE Xiao-cong, LEI Lei, et al (242)
 Effect of adhesive on mechanical properties of self-piercing riveted sandwich structure joint DING Wen-you, HE Xiao-cong, LIU Yang, et al (248)
 Calculation of stress concentration coefficient of V-shaped groove of bar in low-stress cropping ZHANG Li-jun, ZHANG De-pei, ZHOU Shu-en, et al (254)
 Study on crack propagation in X80 pressure pipe based on ABAQUS NI Yang, MA Ting-xia, LIU Wei-yang (261)
 Study on stress and strain of pressure pipe with inner corrosion depression MA Xin, LI Jie, XUE Tao, et al (267)
 Influence factors and distribution of stress on inner and outer surfaces of roll sleeve of back-up roll for cold mill DONG Yong-gang, SONG Jian-feng, ZHU Heng, et al (274)
 Calculation analysis on mandrel bending deflection and critical unstable force for rotary piercing mill PANG Yu-hua, WANG Yang, LIU Dong, et al (282)

Forming Equipment and Intelligent Manufacture

- Study on thermal contour of work roll in hot rolling based on PSO and DE optimization algorithm YANG Jin-guang, SUN Li-rong, LIU Hua-qiang, et al (289)
 Finite element analysis and verification of stretch-reducing for Baosteel seamless tube WANG Chao-feng, HU Bin-bin, DU Feng-shan (297)

(Executive Editor: ZHOU Lin, QIN Sixiao)

中文核心期刊

中国科技核心期刊

RCCSE中国核心学术期刊

中国科学引文数据库（CSCD）来源期刊

中国科技期刊引证报告统计源核心期刊

中国学术期刊文摘数据库（核心版，CSAD-C）

中国学术期刊综合评价数据库

中国学术期刊（光盘版）

万方数据——数字化期刊群

美国《化学文摘》CA

美国《剑桥科学文摘材料信息》（CSA: MI）

荷兰爱思唯尔公司Scopus数据库

日本科学技术振兴机构中国文献数据库（JST）

塑性工程学报

JOURNAL OF PLASTICITY ENGINEERING

2018年第25卷第3期 6月28日出版（双月刊）

Vol.25 No.3 Published on June 28, 2018 (Bimonthly)

主管单位：中国科学技术协会

主办单位：中国机械工程学会

编辑出版：《塑性工程学报》编辑部

地址：北京市海淀区学清路18号（100083）

电话：（010）62912592

（010）82415079

网址：<http://sxgc.cbpt.cnki.net>

电子邮箱：sxgxb@263.net

荣誉主编：海锦涛

主 编：陆 辛

常务副主编：金 红

编辑部主任：金 红

编辑部副主任：周 林

印刷：北京科信印刷有限公司

国内发行：北京报刊发行局

海外发行：中国国际图书贸易集团有限公司

Responsible Department: China Association for Science and Technology

Sponsored by: Chinese Mechanical Engineering Society

Edited and Published by: Editorial Office of Journal of Plasticity Engineering

Add: No.18, Xueqing Road, Beijing, 100083, China

Tel: +86-10-62912592

+86-10-82415079

Website: <http://sxgc.cbpt.cnki.net>

E-mail: sxgxb@263.net

Honourary Editor-in-Chief : HAI Jin-tao

Editor-in-Chief : LU Xin

Executive Vice Editor-in-Chief: JIN Hong

Editorial Director: JIN Hong

Vice Editorial Director: ZHOU Lin

Printed by: Beijing Kexin Printing Co., Ltd.

Distributed Domestically by: Beijing Bureau for Distribution of Newspapers and
Journals

Overseas Distributor: China International Book Trading Corporation

国内邮发代号：80-353

定价：25.00元/期

万方数据



微信公众号



官方网站

ISSN 1007-2012



0 6>