



ISSN 1007-2012

CN 11-3449/TG

CODEN SGXUFE

塑性工程学报

JOURNAL OF PLASTICITY ENGINEERING

9

2022 Vol.29

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 29 卷 第 9 期 2022 年 9 月 28 日

目次

综合评述

高能 X 射线衍射在先进高强钢塑性变形研究中的应用 张明赫, 严翔, 吴翼铭, 等 (1)

难加工金属材料电塑性辅助加工技术 赵理想, 陈光军, 轩文涛, 等 (11)

塑性成形技术与工艺

多道次单点渐进成形多参数交互影响 苏春建, 赵栋, 李广震, 等 (25)

基于仿真和试验的平面时序翻边研究 龚志辉, 方博浩, 高晨, 等 (32)

某汽车内板冲压成形工艺优化及回弹补偿 王大鹏, 李晓峰 (40)

热冲压超高强钢模具冲孔实验研究 黄苏婷, 陈震, 杨晨东, 等 (47)

基于灰色关联度的 TA1 内螺纹管挤压模具的结构优化 黎华杰, 黄东男, 熊振, 等 (56)

2124 铝合金时效成形模具型面修正有限元分析及试验验证 庄振民, 赵汝岩, 管旭, 等 (64)

基于响应面法的铝合金波纹管热屈曲成形工艺参数分析 徐天娇, 张天寅, 韩先洪 (69)

多层高温合金波纹管液压胀形波高精确控制 刘健, 李亮, 刘静, 等 (80)

高温钛合金航空发动机叶盘锻造变形均匀性研究 洪小英, 李亮亮, 王乐 (88)

大型凸台截面环件径向轧制刚性稳定条件研究 刘吉康, 邓加东, 钱东升, 等 (95)

双金属复合管热连轧有限元模拟及极限减壁量确定 胡建华, 李靖, 王仕杰, 等 (102)

大型 L 型截面环件轧制过程中折叠缺陷形成机理的数值模拟 刘永云, 张立文, 张驰, 等 (108)

冷连轧机组卷取带钢崩断缺陷形成机理及治理技术 陈骏生, 张文军, 崔熙颖, 等 (114)

TA15/Ti2AlNb 扩散连接界面组织及变形研究	周贤军, 武 永, 秦中环, 等 (120)
不同铆枪干涉螺栓安装效率及噪音对比研究	王晓荷, 曹增强, 张铭豪, 等 (127)
基于应力-温度等效映射方法的 FSW 变形预测	高月华, 常天根, 刘其鹏, 等 (135)
F22 高强钢的热变形行为与晶粒组织预测	向 彪, 孙朝远, 陈 雷 (144)
锯条用钢 65Mn 热变形行为及本构方程	喻建林, 吕瑞国, 李声慈, 等 (151)
GH4141 高温合金热变形行为及组织演变	肖东平, 付建辉, 陈 琦, 等 (157)
考虑相变和温升效应的奥氏体不锈钢本构方程	黄栩凯, 夏肇东, 王洪林, 等 (165)
Custom450 钢拉伸的晶体塑性有限元分析	艾 鑫, 王 成, 郭素娟, 等 (175)
准静态压缩 AlSi10Mg 铝合金柱胞单元的变形特性	陆 飞, 邓安仲, 李 飞 (181)
准静态轴压载荷下 Al-CFRP 梯度混合管的多目标优化设计	秦晓宇, 马其华, 胡沛源, 等 (188)
划痕损伤对含铆钉孔 2198-T8 铝锂合金疲劳性能的影响	张雪洋, 钟振东, 潘雪纯, 等 (199)
基于蠕变理论的钒和铌微合金化中碳钢的物理本构方程	魏海莲, 邓笑举, 潘红波, 等 (207)
航空面齿轮热滚轧表面残余应力分析	靳园园, 徐红玉, 李 莉, 等 (216)

消息

欢迎订阅《塑性工程学报》杂志 (月刊)	(79)
---------------------------	------

(责任编辑: 周 林, 朱晓坤)

JOURNAL OF PLASTICITY ENGINEERING

(SUXING GONGCHENG XUEBAO)

Vol. 29 No. 9 Sep. 28 2022

Contents

Summary

- Application of high-energy X-ray diffraction in research of plastic deformation of advanced high-strength steels
..... ZHANG Ming-he, YAN Xiang, WU Yi-ming, et al (1)
- Electroplastically assisted manufacturing technology for hard-to-working metal materials
..... ZHAO Li-xiang, CHEN Guang-jun, XUAN Wen-tao, et al (11)

Plasticity Forming Technology and Process

- Interaction influence of multi-parameters in multipass single-point incremental forming
..... SU Chun-jian, ZHAO Dong, LI Guang-zhen, et al (25)
- Study on plane sequential flanging based on simulation and experiment
..... GONG Zhi-hui, FANG Bo-hao, GAO Chen, et al (32)
- Stamping process optimization and springback compensation of an automobile inner plate
..... WANG Da-peng, LI Xiao-feng (40)
- Experimental research on die punching of hot stamped ultra-high strength steel
..... HUANG Su-ting, CHEN Zhen, YANG Chen-dong, et al (47)
- Structural optimization of extrusion die for TA1 internal thread tube based on grey correlation degree
..... LI Hua-jie, HUANG Dong-nan, XIONG Zhen, et al (56)
- Finite element analysis and test verification of die surface modification for age forming of 2124 aluminum alloy
..... ZHUANG Zhen-min, ZHAO Ru-yan, GUAN Xu, et al (64)
- Analysis on process parameters of thermal buckling forming for aluminum alloy bellows based on response surface method
..... XU Tian-jiao, ZHANG Tian-yin, HAN Xian-hong (69)
- Precision control of convolution height of multilayer high-temperature alloy bellows in hydroforming
..... LIU Jian, LI Liang, LIU Jing, et al (80)
- Study on forging deformation uniformity of high-temperature titanium alloy aero-engine blade disc
..... HONG Xiao-ying, LI Liang-liang, WANG Le (88)
- Study on rigid stability condition of radial-axial rolling for large convex-section ring
..... LIU Ji-kang, DENG Jia-dong, QIAN Dong-sheng, et al (95)

Finite element simulation of bimetallic composite pipe hot continuous rolling and determination of limit wall reduction	.....	HU Jian-hua, LI Jing, WANG Shi-jie, et al (102)
Numerical simulation on formation mechanism of folding defect for large-scale L-shaped profile ring during rolling process	.....	LIU Yong-yun, ZHANG Li-wen, ZHANG Chi, et al (108)
Formation mechanism and treatment technology of collapse defects of coiled strip steel on cold continuous rolling unit	.....	CHEN Jun-sheng, ZHANG Wen-jun, CUI Xi-ying, et al (114)
Study on interface microstructure and deformation during the diffusion bonding of TA15/Ti2AlNb	.....	ZHOU Xian-jun, WU Yong, QIN Zhong-huan, et al (120)
Comparative study on installation efficiency and noise of interference bolts with different riveting guns	.....	WANG Xiao-he, CAO Zeng-qiang, ZHANG Ming-hao, et al (127)
Deformation prediction of FSW based on stress-temperature equivalence mapping method	.....	GAO Yue-hua, CHANG Tian-gen, LIU Qi-peng, et al (135)
Hot deformation behavior and grain structure prediction of F22 high-strength steel	.....	XIANG Biao, SUN Chao-yuan, CHEN Lei (144)
Hot deformation behavior and constitutive equation of saw blade steel 65Mn	.....	YU Jian-lin, LÜ Rui-guo, LI Sheng-ci, et al (151)
Hot deformation behavior and microstructure evolution of GH4141 superalloy	.....	XIAO Dong-ping, FU Jian-hui, CHEN Qi, et al (157)
Constitutive equation of austenitic stainless steel considering phase transformation and temperature rise effect	.....	HUANG Xu-kai, XIA Zhao-dong, WANG Hong-lin, et al (165)
Crystal plasticity finite element analysis of Custom450 steel under tensile loading	.....	AI Xin, WANG Cheng, GUO Su-juan, et al (175)
Deformation characteristics of quasi-static compressed AlSi10Mg aluminum alloy column cell element	.....	LU Fei, DENG An-zhong, LI Fei (181)
Multi-objective optimization design of Al-CFRP gradient hybrid tubes under quasi-static axial compression load	.....	QIN Xiao-yu, MA Qi-hua, HU Pei-yuan, et al (188)
Effect of scratch damage on fatigue performance of 2198-T8 aluminum-lithium alloy with rivet holes	.....	ZHANG Xue-yang, ZHONG Zhen-dong, PAN Xue-chun, et al (199)
Physical constitutive equations of vanadium and niobium micro-alloyed medium carbon steels based on creep theory	.....	WEI Hai-lian, DENG Xiao-ju, PAN Hong-bo, et al (207)
Analysis of surface residual stress of hot-rolled aviation face gear	.....	JIN Yuan-yuan, XU Hong-yu, LI Li, et al (216)

(Executive Editor: ZHOU Lin, ZHU Xiao-kun)