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首 页 学院介绍 招生简章 导师风采 创新基地 参考信息 考研问答 政策文件

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(限300字)

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主要论文

Lin Wang, Xiangdong Gao*, Zinqin Chen. Status analysis of keyhole bottom in laser-MAG hybrid welding process. *Optics Express*, 2018, 26(1): 347-355

Xiangdong Gao*, Chongzhou Lan, Deyong You, Guohua Li, Nanfeng Zhang. Weldment

Nondestructive Testing Using Magneto-optical Imaging Induced by Alternating Magnetic Field.

Journal of Nondestructive Evaluation, 2017,36:55

Xiang-dong Gao*, Zheng-wen Li, De-yong You, Seiji Katayama. A Novel Microstructure Detection of Welded joint by Using Magneto-optical Imaging Technology. *Chinese Physics B* . 2017, 26(5): 054214

Xiangdong Gao*, Guanxiong Huang, Deyong You, Chongzhou Lan, Nanfeng Zhang. Magnetooptical Imaging Deviation Model of Micro-gap Weld Joint. *Journal of Manufacturing Systems*. 2017, 42: 82-92

Xiangdong Gao*, Ling Mo, Deyong You, Zhuman Li. Tight butt joint weld detection based on optical flow and particle filtering of magneto-optical imaging. *Mechanical Systems and Signal Processing*, 2017, 96: 16-30

Xiangdong Gao*, Yingying Liu, Chongzhou Lan, Zhenlin Xiao, Xiaohui Chen. Laser-induced infrared characteristic analysis for evaluating joint deviation during austenitic stainless steel laser welding. The International Journal of Advanced Manufacturing Technology. 2017, 88(5): 1877-1888

Xiangdong Gao*, Yuquan Chen, Deyong You, Zhenlin Xiao, Xiaohui Chen. Detection of micro gap weld joint by using magneto-optical imaging and Kalman filtering compensated with RBF neural network. *Mechanical Systems and Signal Processing*. 2017, 84: 570-583

Xiangdong Gao*, Yan Sun, Deyong You, Zhenlin Xiao, Xiaohui Chen. Multi-sensor Information Fusion for Monitoring Disk Laser Welding. *The International Journal of Advanced Manufacturing Technology*. 2016, 85(5-8): 1167-1175

Xiangdong Gao*, Ling Mo, Zhenlin Xiao, Xiaohui Chen, Seiji Katayama. Seam tracking based on Kalman filtering of micro-gap weld using magneto-optical image. The International Journal of Advanced Manufacturing Technology. 2016, 83: 21-32

Zhang Yanxi, Gao Xiangdong*, Katayama Seiji. Weld appearance prediction with BP Neural Network improved by Genetic Algorithm during disk laser welding. *Journal of Manufacturing Systems*. 2015, 34: 53-59

Gao Xiangdong*, Liu Guiqian. Elucidation of Metallic Plume and Spatter Characteristics Based on SVM during High-power Disk Laser Welding. *Plasma Science and Technology*. 2015, 17(1): 32-36

Gao Xiang-Dong*, Chen Zi-Qin. Measurement of micro weld joint position based on magneto-optical imaging. *Chinese Physics B*. 2015. 24(1): 018103-1-7

Deyong You, Xiangdong Gao*, and Seiji Katayama. WPD-PCA Based Laser Welding Process Monitoring and Defects Diagnosis by Using FNN and SVM. *IEEE Transactions on Industrial Electronics*. 2015, 62(1): 628-636

Deyong You, Xiangdong Gao*, and Seiji Katayama. A novel stability quantification for disk laser welding by using frequency correlation coefficient between multiple-optics signals. *IEEE-ASME Transactions on Mechatronics*. 2015, 20(1): 327-337

Deyong You, Xiangdong Gao*, Seiji Katayama. Detection of Imperfection Formation in Disk Laser Welding Using Multiple On-line Measurements. *Journal of Materials Processing Technology*. 2015, 219(5): 209-220

Xiangdong Gao*, Yanxi Zhang. Monitoring of welding status by molten pool morphology during highpower disk laser welding. Optik - International Journal for Light and Electron Optics. 2015,126 (19):1797-1802

Xiangdong Gao*, Deyong You and Seiji Katayama. The high frequency characteristics of laser reflection and visible light during solid state disk laser welding. Laser Physics Letters, 2015, 12: 075003

Gao Xiangdong*, Zhen Renhe, Xiao Zhenlin, Katayama Seiji. Modeling for detecting micro-gap weld based on magneto-optical imaging. *Journal of Manufacturing Systems*. 2015, 37: 193-200

Zhang Yanxi, Gao Xiangdong*. Analysis of characteristics of molten pool using cast shadow during high-power disk laser welding. *International Journal of Advanced Manufacturing Technology*. 2014, 70(9): 1979-1988

Deyong You, Xiangdong Gao*, Seiji Katayama. Visual-based Spatter Detection during High-power Disk Laser Welding. *Optics and Lasers in Engineering*. 2014, 54: 1-7

Deyong You, Xiangdong Gao*, and Seiji Katayama. Review of laser welding monitoring. Science and Technology of Welding & Joining. 2014, 19(3): 181-201

Xiang-Dong Gao*, Yan-Xi Zhang. Prediction Model of Weld Width during High-Power Disk Laser Welding of 304 Austenitic Stainless Steel. *International Journal of Precision Engineering and Manufacturing*. 2014, 15(3): 399-405

Deyong You, Xiangdong Gao*, Seiji Katayama. Multisensor Fusion System for Monitoring High-

w 页码, 3/4(W)

power Disk Laser Welding Using Support Vector Machine. *IEEE Transactions on Industrial Informatics*. 2014, 10(2):1285-1295

Xiangdong Gao*, Yonghua Liu, Deyong You. Detection of micro-weld joint by magneto-optical imaging. Optics & Laser Technology. 2014, 62: 141-151

Deyong You, Xiangdong Gao*, and Seiji Katayama. Monitoring of High-power Laser Welding Using High-speed Photographing and Image Processing. *Mechanical Systems and Signal Processing*. 2014. 49: 39-52

Xiangdong Gao*, Yuquan Chen. Detection of micro gap weld using magneto-optical imaging during laser welding. The International Journal of Advanced Manufacturing Technology. 2014, 73: 23-33

Xiangdong Gao*, Yan Sun. Monitoring of high power disk laser welding of Type 304 austenitic stainless steel based on keyhole dynamic characteristics. *Insight - Non-Destructive Testing & Condition Monitoring*. 2014, 56 (6): 312-317

Xiangdong Gao*, Yan Sun, and Seiji Katayama. Neural network of plume and spatter for monitoring high-power disk laser welding. *International Journal of Precision Engineering and Manufacturing-Green Technology*. 2014, 1(4): 293-298

Ziqin Chen, Xiangdong Gao*. Detection of weld pool width using infrared imaging during high-power fiber laser welding of type 304 austenitic stainless steel. The International Journal of Advanced Manufacturing Technology. 2014, 74: 1247-1254

Xiangdong Gao*, Xungao Zhong, Deyong You, Seiji Katayama. Kalman Filtering Compensated by

Radial Basis Function Neural Network for Seam Tracking of Laser Welding. IEEE Transactions on

Control Systems Technology. 2013, 21(5): 1916-1923

Deyong You, Xiangdong Gao*, Seiji Katayama. Multiple-optics sensing of high-brightness disk laser welding process. NDT & E International, 2013, 60: 32-39

Wang Teng, Gao Xiangdong*, Katayama Seiji. Analysis of laser-induced plume during disk laser welding at different speeds. *Plasma Science and Technology*. 2013, 15(8): 821-824

X.D. GAO*, L. MO, Q. WEN, AND S. KATAYAMA. Neural Network Model for Recognizing Joint Offset during Fiber Laser Welding. *Welding Journal*. 2013, 92(9): 251-257

Gao Xiangdong* and Wen Qian. Monitoring of High-Power Fiber Laser Welding Based on Principal Component Analysis of Molten Pool Configuration. *Laser Physics*. 2013, 23: 126001

Xiangdong Gao*, Qian Wen, Seiji Katayama. Analysis of high power disk laser welding stability based on classification of plume and spatter characteristics. *Transactions of Nonferrous Metals Society of China*. 2013, 23(12): 3748-3757

Wang Teng, Gao Xiangdong*, Katayama Seiji, Jin Xiaoli. Study of dynamic features of surface plasma in high-power disk laser welding. *Plasma Science and Technology*. 2012, 14(3): 245-251

Xiangdong Gao*, Deyong You, Seiji Katayama. Infrared image recognition for seam tracking monitoring during fiber laser welding. *MECHATRONICS*, 2012, 22(4): 370-380

Xiangdong Gao*, Deyong You, Seiji Katayama. WPD-PCA Based Laser Welding on Adaptive

Kalman Filter Embedded Elman Neural Network during High Power Fiber Laser Welding. IEEE

TRANSACTIONS ON INDUSTRIAL ELECTRONICS. 2012, 59 (11): 4315-4325

Xiangdong Gao*, Dukun Ding, Tianxiang Bai, Seiji Katayama. Weld Pool Image Centroid Algorithm for Seam Tracking Vision Model in Arc Welding Process. *IET Image Processing*. 2011, 5(5): 410-419

Wang Teng, Gao Xiang-Dong*, Li Wei . Characterization of the plasma density with two artificial neural network models . *CHINESE PHYSICS B* . 2010, 19(7) : 070505-1-5

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发明人:高向东,发明专利授权号:ZL201310229304.0,超微间隙对接焊缝磁旋光成像自动检测和跟踪方法

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发明人:高向东,蓝重洲,发明专利授权号: ZL201610681729.9,激光电弧复合焊3D增材修补装置及修补方法

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高向东(主持)。国家自然科学基金51675104,不可见焊接缺陷旋转场能堆积磁光成像检测关键问题研究。2017.01-2020.12

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高向东(主持),国家自然科学基金51175095,激光焊接不可见焊缝磁光成像自动跟踪关键问题研究。 2011.01-2014.12

高向东(主持),国家自然科学基金0375012,基于图像质心的焊缝跟踪新方法研究,2003.01-2005.12

高向东(主持),国家自然科学基金59975030,强等离子体能量传递机理与智能控制的研究,1999.01-2002.12

高向东(主持),广东省前沿与关键技术创新专项资金(重大科技专项)项目2014B090921008,锻压装备复杂结构机身体机器人自动焊接系统集成与应用,2015.01-2017.12

高向东(主持),广东省自然科学基金重点项目10251009001000001,大功率光纤激光焊接不可见焊缝 红外识别与跟踪关键技术研究。2010.01-2012.12

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高向东(主持),广东省科技计划项目2007B010400069,JCOE直缝双面埋弧焊管焊缝跟踪机的研制。

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