

电机与控制学报

第 21 卷 第 6 期 (总第 152 期) 2017 年 06 月

目 次

异步电动机断条与静偏心复合故障的电流特征	田慕琴, 李双双, 宋建成, 吝伶俐 (1)
带电阻在线辨识的改进型永磁同步电机滑模观测方法	张勇军, 汪伟, 张小庆, 肖雄, 尚敬 (10)
同步整流双谐振 LLC-DCX 悬浮控制电源研究	刘文军, 易俊宏, 马红波 (18)
新型机械轴向变磁通永磁同步电机分析研究	刘细平, 钟清伟, 谢清华, 黄跃飞 (26)
智能电动机保护器的电磁辐射定量评估方法研究	赵靖英, 周思诺, 高佳雄 (34)
基于等效电路参数特征量的油纸绝缘老化状态评估	贺德华, 蔡金锭, 黄云程 (44)
基于 α 松弛分析 CB/LDPE 纳米复合介质空间电荷特性	闫志雨, 赵洪, 韩宝忠, 杨佳明, 陈俊岐 (50)
用于无刷直流电机驱动的谐振极软开关逆变器	王强, 唐朝垠, 王天施, 刘晓琴 (59)
电网不平衡情况下基于神经网络并网逆变器同步技术研究	阳同光 (66)
三相电流主分量融合的电机故障图形诊断方法	刘沛津, 高雪波, 孙昱 (75)
基于自适应方法的欠驱动 AUV 地形跟踪控制	白继嵩, 庞永杰, 万磊, 张英浩, 张强 (83)
小波降噪及 Hilbert 变换在电机轴承故障诊断中的应用	丁锋, 秦峰伟 (89)
一种分数阶微积分算子的有理函数逼近阶数最小化方法	张旭秀, 李卫东, 盛虎, 丁鸣艳 (96)
一种仿生机器鼠的跟踪与避障策略	满春涛, 曹森, 曹永成, 宋永博 (104)
混联式汽车电泳涂装输送机构同步滑模控制	高国琴, 吴欣桐, 曹园园, 方志明 (113)

期刊基本参数: CN 23-1408/TM * 1997 * m * A4 * 122 * zh * P * ¥15.00 * 2000 * 15 * 2017-06 * n

责任编辑: 刘素菊

英文审校: 姜毓锋 郎非

ELECTRIC MACHINES AND CONTROL

Vol. 21 No. 6 Jun. 2017

CONTENTS

Effects of the mixed fault of broken bars and static eccentricity on current of induction motor	<i>TIAN Mu-qin, LI Shuang-shuang, SONG Jian-cheng, LIN Ling-yan</i> (1)
Study on improved sliding-mode control with resistance estimation of PMSM	<i>ZHANG Yong-jun, WANG Wei, ZHANG Xiao-qing, XIAO Xiong, SHANG Jing</i> (10)
Double resonant LLC-DCX with synchronous rectifier based power supply for maglev control system applications	<i>LIU Wen-jun, YI Jun-hong, MA Hong-bo</i> (18)
Analysis of a mechanical axial variable flux permanent magnet synchronous machine	<i>LIU Xi-ping, ZHONG Qing-wei, XIE Qing-hua, HUANG Yue-fei</i> (26)
Research on quantitative assessment method of electromagnetic radiation of intelligent motor protector	<i>ZHAO Jing-ying, ZHOU Si-nuo, GAO Jia-xiong</i> (34)
Study on insulation condition of power transformer based on the equivalent circuit characteristic parameters	<i>HE De-hua, CAI Jin-ding, HUANG Yun-cheng</i> (44)
Analysis of the space charge characteristic of CB/LDPE nanocomposites from the view of α relaxation	<i>YAN Zhi-yu, ZHAO Hong, HAN Bao-zhong, YANG Jia-ming, CHEN Jun-qi</i> (50)
A resonant pole soft-switching inverter for brushless DC motor drives	<i>WANG Qiang, TANG Chao-yin, WANG Tian-shi, LIU Xiao-qin</i> (59)
Research on grid synchronization of grid-connected inverter based on neural network under unbalanced voltage conditions	<i>YANG Tong-guang</i> (66)
Graphic diagnosis method of motor faults based on components fusion of three phase currents PCA	<i>LIU Pei-jin, GAO Xue-bo, SUN Yu</i> (75)
Underactuated AUV's bottom-following control based on self-adaptive method	<i>BAI Ji-song, PANG Yong-jie, WAN Lei, ZHANG Ying-hao, ZHANG Qiang</i> (83)
Application of wavelet denoising and Hilbert transform in fault diagnosis of motor bearing	<i>DING Feng, QIN Feng-wei</i> (89)
Minimum method of rational function orders for approximation fractional differential and integral operators	<i>ZHANG Xu-xiu, LI Wei-dong, SHENG Hu, DING Ming-yan</i> (96)
Tracking and obstacle avoidance strategy for a bionic robot-rat	<i>MAN Chun-tao, CAO Miao, CAO Yong-cheng, SONG Yong-bo</i> (104)
Synchronized sliding mode control of a hybrid mechanism for automobile electro-coating conveying	<i>GAO Guo-qin, WU Xin-tong, CAO Yuan-yuan, FANG Zhi-ming</i> (113)

Serial parameters: CN 23-1408/TM * 1997 * m * A4 * 122 * zh * P * ¥15.00 * 2000 * 15 * 2017-06 * n

Responsible Editor: *LIU Su-ju* **English Examiner:** *JIANG Yu-feng LANG Fei*