

- ◆ 《中国科学引文数据库》来源期刊
- ◆ 《中国学术期刊综合评价数据库》来源期刊
- ◆ 《中文科技期刊数据库》全文收录期刊

- ◆ 《中国核心期刊（遴选）数据库》收录期刊
- ◆ 《中国期刊全文数据库》收录期刊
- ◆ 《中国期刊网》《中国学术期刊（光盘版）》全文收录期刊



创建绿色家园

全面腐蚀控制

唯君题



TOTAL CORROSION CONTROL

以中国智慧引领全球 筑起腐蚀控制钢铁长城

“中国工业防腐蚀技术协会”更名为“中国腐蚀控制技术协会”



ISSN 1008-7818

9 771008 781147

中国腐蚀控制技术协会主办



全面腐蚀控制杂志社出版

01

2023.VOL.37

1986年创刊·公开发行

全面腐蚀控制

CONTENTS 目次

管理篇

【协会工作】

1 新年贺词

技术篇

【专论】

13 LNG接收站埋地管道腐蚀分析方法研究

/王亚群 王少炜 范明龙

【经验交流】

19 高压直接地极对管道干扰规律及缓解措施研究

/张浩强 陈少松 张骁勇 徐学利 刘昊天

24 牺牲阳极的性能监测及寿命预测技术研究

/刘昊天 王金光 张骁勇 徐学利 单汗青 张浩强

28 油田给排水管网的优化设计工作措施

/吴桂超

31 交联聚乙烯非粘结柔性管道生产工艺及质量控制

/李敏 何婷婷 代志双 金磊 韩雪艳

36 穿越管道电磁法探测埋深精度制约因素及改进策略

的应用

/张鑫 马文甲 薄克明 彭记寺 金兆波

40 常减压装置塔底奥氏体不锈钢弯头开裂原因分析及处理

/王俊杰

45 长输管道河流穿跨越方案分析

/丁天良

48 长输管道工程造价有效控制的途径探讨

/胡亚冲

51 油管漏磁探伤缺陷分析及预防措施分析

/康志敏

54 压力容器制造过程中常见质量问题分析

/郭春锋

57 环境检测技术的研究和生态可持续发展探讨

/王熯 宋金洪 武中波 刘贺 于洋洋

60 热网加热器泄漏引起水质异常分析

/王小辉 程家庆

64 网状地床在交流杂散电流排流系统的应用

/周红涛 李垚璐

69 过热器氧化皮在线监测设备的研究与应用

/杜学聪 刘忠

- 【腐蚀研究】**
- 74 中美管道内微生物腐蚀控制标准对比分析
/蔡 亮
- 78 固定管板式换热器换热管更换抽取与焊接
/周利华 杜 亮 马兴国 荣维海 王诗林
- 81 中江气田体积压裂井冲蚀问题及对策
/张兴堂 邓双林 李 波 杨 杰 冯 斌
任基文 王 迪 王子瑞
- 85 蒸汽闪发罐泄漏分析与对策
/符海龙
- 88 桥梁防腐涂装方法和施工质量控制策略
/彭德武
- 91 油田集输管道腐蚀与防腐技术分析
/刘玉亮
- 94 大型储罐工程EPC项目管理策略
/李婷婷
- 97 天然气长输管道山地陡坡段施工技术
/雷 阳
- 100 基于网络的石化设备腐蚀案例库的设计与实现
/任 帅 王海燕 陈 旭 赵丽君 韩利平
张佐伊
- 105 化工装置用消防管道腐蚀特点及快速评估防治
/张蒲根
- 108 大桥桩基防腐措施与施工探讨
/胡建国 柴春鹂
- 111 天然气长输管道线路选择及施工技术
/付宏斌
- 114 核电厂齿轮箱蜗轮固定螺栓断裂失效分析
/徐 科 胡明磊 宋逢兵 吴唯洁
- 118 油田埋地管道防腐层破损点检测探讨
/陈海彬
- 121 瓦斯回收压缩机循环水冷却器腐蚀原因分析
/江 臣 周文凡 李 敏
- 126 浅谈油田注水管道腐蚀现状与防腐策略研究
/陆宏宇
- 129 埋地石油集输管道防腐蚀技术研究
/白晓亮
- 132 空气预热器搪瓷管腐蚀失效分析
/汤志新
- 136 油气管道防腐施工质量影响因素及控制
对策研究
/杨泽宇

TOTAL CORROSION CONTROL

(Monthly)

Vol. 37 No.01 (Serial No. 274)

JAN 28, 2023

CONTENTS

• Monograph •

Study on Corrosion Analysis Method of Buried Pipeline in LNG Terminal WANG Ya-qun, WANG Shao-wei, FAN Ming-long (13)

• Experience Exchange •

- Interference of HVDC Grounding Electrode to Pipeline and Protection Measures ZHANG Hao-qiang, CHEN Shao-song, ZHANG Xiao-yong, XU Xue-li, LIU Hao-tian (19)
- Study on Performance Monitoring and Life Prediction Technology of Sacrificial Anode LIU Hao-tian, WANG Jin-guang, XU Xue-li, ZHANG Xiao-yong, SHAN Han-qing, ZHANG Hao-qiang (24)
- Optimization Design Measures of Oilfield Water Supply and Drainage Pipe Network WU Gui-chao (28)
- Production Technology and Quality Control of XLPE Un-bond Flexible Pipeline LI-Min, HE Ting-ting, DAI Zhi-shuang, JIN Lei, HAN Xue-yan (31)
- Application of Restricting Factors and Improving Strategies of Electromagnetic Method for Detecting Buried Depth of Crossing Pipeline ZHANG Xin, MA Wen-jia, BO Ke-ming, PENG Ji-si, JIN Zhao-bo (36)
- Analysis for the Cracking of Austenitic Stainless Steel Elbows in Crude Distillation Unit and the Solution Measures WANG Jun-jie (40)
- Analysis of River Crossing Scheme for Long Haul Pipeline DING Tian-liang (45)
- Discussion on Effective Control of Long Distance Pipeline Project Cost HU Ya-chong (48)
- Analysis of Defects and Preventive Measures for Magnetic Leakage Testing of Tubing KANG Zhi-min (51)
- Analysis of Common Quality Problems in the Manufacturing Process of Pressure Vessel GUO Chun-feng (54)
- Research on Environmental Detection Technology and Discussion on Ecological Sustainable Development WANG Man, SONG Jin-hong, WU Zhong-bo, LIU He, YU Yang-yang (57)
- Analysis of Water Quality Abnormality Caused By the Leakage of Heating Network Heater WANG Xiao-hui, CHENG Jia-qing (60)
- Application of Reticulated Ground Bed to AC Stray Current Drainage System ZHOU Hong-tao, LI Yao-lu (64)
- Research and Application of On-Line Monitoring Equipment for Superheater Scale DU Xue-cong, LIU Zhong (69)

• Corrosion Research •

- Comparative Analysis of Microbiologically Influenced Corrosion Control Standards in Pipelines between China and the United States CAI Liang (74)
- Replacement Extraction and Welding of Heat Exchange Tube of Fixed Tubesheet Heat Exchanger ZHOU Li-hua, DU Liang, MA Xing-guo, RONG Wei-hai, WANG Shi-lin (78)
- Erosion Problem and Countermeasure of Volumetric Fracturing Well in Zhongjiang Gas Field ZHANG Xing-tang, DENG Shuang-lin, LI Bo, YANG Jie, FENG Bin, REN Ji-wen, WANG Di, WANG Zi-rui (81)
- Leakage analysis and Countermeasures of Steam Flash Tank FU Hai-long (85)
- Bridge Anti-Corrosion Coating Method and Construction Quality Control Strategy PENG De-wu (88)
- Application of Tauma Gading Diagnosis Method in Emergency Treatment of Bne Tauma LIU Yu-liang (91)
- EPC Project Management Strategy of Large Storage Tank Project LI Ting-ting (94)
- Construction Technology of Long-distance Natural Gas Pipeline in Mountainous and Steep Slope Section LEI Yang (97)
- Design and Development of Case Base Based on Web for Corrosion Failure of Petrochemical Equipment REN Shuai, WANG Hai-yan, CHEN Xu, ZHAO Li-jun, HAN Li-ping, ZHANG Zuo-yi (100)
- Corrosion Characteristics and Rapid Evaluation and Prevention of Fire Pipelines Used in Chemical Plants ZHANG Pu-gen (105)
- Discussion on Anti-corrosion Measures and Construction of Bridge Pile Foundation HU Jian-guo, CHAI Chun-li (108)
- Route Selection and Construction Technology of Long-distance Natural Gas Pipeline FU Hong-Bin (111)
- Fracture Failure Analysis of Fixing Bolt of Worm Gear in Gearbox of a Nuclear Power Plant XU Ke, HU Ming-lei, SONG Feng-bing, WU Wei-jie (114)
- Discussion on Detection of Damaged Points of Anticorrosive Coating of Buried Pipeline in Oil Field CHEN Hai-bin (118)
- Analysis of Corrosion Causes of Circulating Water Cooler of Gas Recovery Compressor JIANG Chen, ZHOU Wen-fan, LI Min (121)
- Research on Corrosion Status and Anti-corrosion Strategy of Oil Field Water Injection Pipeline LU Hong-yu (126)
- Research on Anti-corrosion Technology of Buried Petroleum Gathering and Transportation Pipeline BAI Xiao-liang (129)
- Corrosion Failure Analysis of Air Preheater Enamel Pipe TANG Zhi-xin (132)
- Research on Influencing factors and Control Countermeasures of Anticorrosive Construction Quality of Oil and Gas Pipeline YANG Ze-yu (136)

Sponsored by China Industry Anticorrosion Technology Association (CIATA)
Edited and Published by the Editorial Department of TOTAL CORROSION CONTROL
Honorary Chairman of Editorial Committee: PAN Lian-sheng
Chairman of Editorial Committee: KE Wei
Editor in Chief: REN Zhen-duo (Concurrently)
Add: C-509, Yayunhaoting, No.9 Xiaoying Rd, Chaoyang Dist., Beijing, China
Post Code: 100101
Tel: (8610) 64896415 64896750
Fax: (8610) 64896415
Fixed Price: US\$ | 6.00
Web site: <http://www.ciata-tcc.com>