化工管理
第30期　总第791期　2026年10月21日　旬刊

目次

管理方略

常减压蒸馏装置智能化管理模式优化研究 …… 石兴奎　1
大型企业数据治理运营机制的体系化构建 …… 王虹祺，易连成　5

人才培养

“智联融创”驱动食品工厂设计课程思政与人才培养模式 …… 姜桥，周励，张艺峰，王铭悦，赵鑫　10
近红外荧光探针科研案例驱动材料专业人才培养的研究 …… 程方锐，郑润颖，成嘉怡，兰欣，曹人平　15
高校固废领域中复合型人才培养模式探索 …… 牛臻，刘承龙，岳彤　20
藏药特色人才培养的分析化学实验教学改革与实践 …… 顿珠次仁　25
终身学习背景下山西化工人才培养路径探究 …… 冯苗苗，李鹏飞，李茹画　30

环保与节能

钾肥生产副产物资源化路径探索及其环境影响评估 …… 桑玉琰，屈瑞华，庄淑慧　35
磷酸替米考星无组织废气治理工艺优化研究 …… 张宏科，刘亚林，邱波　39
化工企业环境监测数据质量影响因素及提升对策 …… 李庆惠　43

安全管理

基于多源数据融合的油田动火作业风险实时预警模型研究 …… 高晓谦，何宗运　47
基于YOLOv8的安全帽检测探索 …… 谢县礼，郭德科，刘建，熊赛亿，王俊，秦军　51
浅谈高校实验室危险废弃物的收集与管理 …… 李红福　55
化工企业作业许可管理现存问题及优化措施研究 …… 孙奎，张志华　60
海底电缆管道安全保护管理策略 …… 张倩，徐晓玮　65
精细化工硝化工艺动态风险管控体系构建 …… 王立彬，李娟，刘冉冉　70
浅谈P县危险化学品安全监管现状 …… 丁昌，张玉亮　74
基于保护层分析的安全完整性等级评估方法研究与实践 …… 刘建伟　79

设备运维

燃煤锅炉回转式空预器改造前后性能对比分析 …… 杨自嵘，王亚博，张彭　85
移动式压力容器管路与阀门专项检验标准优化 …… 苏步青，金舜宇，刘娜　90
水下管道终端用Bulkhead设计概述及强度校核 …… 程建文，张念涛，罗国良，曹永，高锋　94
浅析LNG储罐罐顶配管安装设计 …… 李汪灏　99

目次

连续油管失效机理分析及有效预防措施研究……吴树毅 103

工艺管控

布洛芬缓释胶囊的处方工艺研究……姜浩海 107
降低LNG接收站全站管道保冷量研究与应用……王俊鹏，刘铭，崔伟永，曹烨，王冬雨，韩帅 111
SCR脱硝催化剂在不同行业中应用研究进展……郁苏俊，王铮，林辉，谢兴星，徐成 115
钯基催化剂应用于烃类选择加氢净化的研究进展……刘宝旗 120
基于电位滴定仪的酸碱滴定精确度提升方法研究……穆玮，张红梅 126
超低排放要求下电厂脱硫脱硝技术改进……刘悦 131

工程与施工

破碎性地层钻井井壁稳定机理与防塌技术研究……曲福治 135
城镇燃气管网系统韧性评估及提升策略在设计阶段的应用……张宁慧 139
城镇老旧小区燃气改造工程的设计风险与进度管理……林天颖 143

油气田管理

油气勘探开发数据标准全生命周期管理工具建设与应用
……田婧，李为冲，张翰羽，戴天琪，封亚冬，房甜甜 147
海洋石油工程建造中管线试压中心的质量管理……王玉堂，曾凡善，王朝，王俊杰，尹清锋 151
基于GIS的海外油田应急救援可视化管理系统构建研究……迟子毅，杨月明 155
南海东部油田开发规划储产转化参数取值合理性研究……彭攀，税敏，彭辉界，钟辉，马晶贝，詹慧丽 159
SEC准则下措施井上市储量评估方法研究及应用……廖意，刘凤，冯沙沙，孙晓娜，曾祥晖 163

彩页说明

彩页1——内蒙古君正能源化工集团股份有限公司
彩页2——《化工管理》征稿简则详版
彩页3——《化工管理》严正声明

补白

我国发布15项氢能领域国家标准(168)

CONTENTS

Management Strategy

Research on optimization of intelligent management mode for atmospheric and vacuum distillation unit ····· SHI Xingkui 1

Systematic construction of data governance and operation mechanism of enterprises ····· WANG Hongqi, YI Liancheng 5

Personnel Culturing

Construction of a model for ideological and political education and talent development in food factory design courses under the "intelligence, connection, integration, and innovation" concept ····· JIANG Qiao, ZHOU Li, ZHANG Yifeng, WANG Mingyue, ZHAO Xin 10

The cultivation of materials professionals driven by near-infrared fluorescent probe scientific case ····· CHENG Fangrui, ZHENG Runying, CHENG Jiayi, LAN Xin, CAO Renping 15

Exploring versatile professionals training model in university solid waste education ···· NIU Zhen, LIU Chenglong, YUE Tong 20

Reform and practice of experimental teaching in analytical chemistry for cultivating talents with Tibetan medicine characteristics ····· Dunzhu Ciren 25

Exploration on the talent training path of the Shanxi chemical industry under the background of lifelong learning ····· FENG Miaomiao, LI Pengfei, LI Ruhua 30

Environmental Protection and Energy Saving

Exploration of resource utilization pathways for potash fertilizer by-products and their environmental impact assessment ····· SANG Yuyan, QU Ruihua, ZHUANG Shuhui 35

Experimental study on the optimization of unorganized waste gas treatment process in Tilmicosin phosphate production workshop ····· ZHANG Hongke, LIU Yalin, QIU Bo 39

Chemical enterprise environmental monitoring data quality influencing factors and improvement strategies ····· LI Qinghui 43

Safety Management

Research on a real-time risk early-warning model for hot work in oilfields based on multi-source data ····· GAO Xiaoqian, HE Zongyun 47

Exploration of safety helmet detection based on YOLOv8 ····· XIE Xianli，GUO Deke，LIU Jian，XIONG Saiyi，WANG Jun，QIN Jun 51

A brief discussion on the collection and management of hazardous waste in university laboratories ····· LI Hongfu 55

Research on existing problems and optimization measures in work permit management of chemical enterprises ····· SUN Kui, ZHANG Zhihua 60

Safety protection management strategy for submarine cable pipeline ····· ZHANG Qian, XU Xiaowei 65

Construction of a dynamic risk management and control system for nitrification processes in the fine chemical industry ····· WANG Libin, LI Juan, LIU Ranran 70

Brief analysis of hazardous chemicals safety supervision status in county P ····· DING Chang, ZHANG Yuliang 74

Research and practice on safety integrity level evaluation methodology based on layer of protection analysis ····· LIU Jianwei 79

Equipment Operation and Maintenance

Comparative analysis of performance before and after the retrofit of rotary air preheater for coal-fired boiler ····· YANG Zirong, WANG Yabo, ZHANG Peng 85

Optimization of special inspection standards for mobile pressure vessel piping and valves ····· SU Buqing, JIN Shunyu, LIU Na 90

CONTENTS

Design overview and strength verification of Bulkhead for subsea pipeline end termination ..... CHENG Jianwen, ZHANG Niantao, LUO Guoliang, CAO Yong, GAO Feng 94

A brief analysis of the installation design of piping on the top of LNG storage tanks ..... LI Wanghao 99

Research on failure mechanisms and effective preventive measures of coiled tubing ..... WU Shuyi 103

Process Control

Study on the formulation and process of ibuprofen sustained-release capsules ..... JIANG Haohai 107

Research and application on reducing cold loss of pipeline insulation system in LNG receiving terminal ..... WANG Junpeng, LIU Ming, CUI Weiyong, CAO Ye, WANG Dongyu, HAN Shuai 111

Research progress of SCR denitrification catalysts in different industries ..... YU Sujun, WANG Zheng, LIN Hui, XIE Xingxing, XU Cheng 115

Research progress on palladium-based catalysts for selective hydrogenation purification of hydrocarbons ..... LIU Baoqi 120

Research on accuracy improvement method of acid-base titration based on potentiometric titrator ..... MU Wei, ZHANG Hongmei 126

Ultra-low emission standards for power plant desulfurization and denitrification technical upgrading ..... LIU Yue 131

Engineering and Construction

Research on mechanism of borehole wall stability and anti-collapse technologies in drilling of fractured strata ..... QU Fuzhi 135

Application of resilience assessment and enhancement strategies for urban gas pipeline network systems in the design phase ..... ZHANG Ninghui 139

Design risks and schedule management of gas renovation projects in old urban residential communities ..... LIN Tianying 143

Oil and Gas Field Management

Construction and application of the full lifecycle management tool for data standards in oil and gas exploration and development ..... TIAN Jing, LI Weichong, ZHANG Hanyu, DAI Tianqi, FENG Yadong, FANG Tiantian 147

Quality management of pipeline pressure test center in offshore oil engineering construction ..... WANG Yutang, ZENG Fanshan, WANG Zhao, WANG Junjie, YIN Qingfeng 151

Construction of a GIS-based visual management system for emergency rescue in overseas oilfields ..... CHI Ziyi, YANG Yueming 155

Research on the rationality of reserve-production conversion parameter values in the development planning of the eastern South China Sea oilfields ..... PENG Pan, SHUI Min, PENG Huijie, ZHONG Hui, MA Jingbei, ZHAN Huili 159

Research and application of SEC-compliant reserves evaluation methods for stimulation wells ..... LIAO Yi, LIU Feng, FENG Shasha, SUN Xiaona, ZENG Xianghui 163