★中国核心期刊 (遴选) 数据库收录期刊

★中国学术期刊综合评价数据库 (CAJCED)统计源期刊



## OIL DEPOT AND GAS STATION



### SHIYOUKU YU JIAYOUZHAN



・广告・

**DEFINING | WHAT'S NEXT** 



APORSAVER

微信公众号 OPW\_Ching

扫码关注微博

尤必得石油设备(苏州)有限公司 vww.opwglobal.com.cn

 中国工厂
 上海分公司
 北京分公司
 广州分公司

 电话: 0512-62745328
 电话: 021-24112600
 电话: 010-80699019
 电话: 020-28865785

ISSN 1008-2263



2021 第 **3** 则

第30卷 总第175期 Vol.30 Total No.175



# 石油库的办证站

#### SHI YOU KU YU JIA YOU ZHAN

1992 年创刊(双月刊) 第 30 卷 第 3 期 总第 175 期 2021 年 6 月 20 日出版

编委会名誉主任:赵日峰 夏世祥 编委会主任:张 毅 副主任:佟德健 王 靓 王维民 特邀顾问:许卫东 叶慧青 邸春宇 王顺江

#### 委员:

社长:张 毅 副社长:佟德健 主编:王 靓 副主编:金万刚 责任编辑:齐凤云

主管:中国石油化工集团有限公司 主办:中国石化集团销售实业有限公司 编辑出版:《石油库与加油站》杂志社 国内发行:《石油库与加油站》杂志社 地址:北京市东城区广渠家园6号楼 303 室

邮编:100022

电话:(010)67006041;67006042

传真:(010)67006043

E-mail;sykjyz@ vip. sina. com 国外发行:中国图书进出口总公司 国外发行代号:2263BM

印刷:廊坊市佳艺印务有限公司 厂址:廊坊市安次区仇庄乡南辛庄村

邮编:065000

标准连续出版物号: ISSN 1008 - 2263 CN 11 - 3945/TE 广告许可:京东工商广登字 20170081 号

广告许可:京东工商广登字20170081 · 国内定价:每册 15 元,全年 90 元

本刊对所栽图文拥有 版权,来经允许,不得转载 或复制,本刊保留追诉的 权利。

#### 目 次

储运技术												
1 加油站防渗槽(盆)的选型与安装工艺										• • • • • •	•••	
		•••••	李中杰	刘	巍	陈子女	加 张	成	陈	忆	贺丛	上军
	加	气站										
	4	车用 LNG 加卢	<b>ミ网络发</b> 月	展布	局的	思路…	•••••	• • • • • •	•••••	•••••	黄	菲
	油华	气管道										
	8	成品油管道运	行常见问	]题及	<b>反应</b> 对	<b> </b> 措施	•••••	• • • • • • •	•••••	•••••	祝	颖
	信息	包技术										
12 北斗卫星导航系统在撬装式加油装置上的应用							•••••	• • • • • •	•••			
			窦明远	邹	帅	李浩钦	名廖	小花	冯	清	黄福	马川
	环	<b>竟保护</b>										
	15	碳盘查在油品	品销售企	业中	的运	用	•••••	• • • • • •	•••••	•••••	肖	芳
数质量管理												
	19	一种新型加油	油枪自动	检定	装置	的研发	•••••	•••••	•••••	•••••	•••••	•••
		… 赵 邈	宋述古	魏	凯	李	忠 田	钦	韩中	中华	王雪	了冰
	23	<b>《JJG 168</b> ─2	018 立式	金属	罐检	定规和	星》中几	<b>L何法</b>	罐底	底量	的计	算
	方剂	去	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	王松	公武
	安:	全管理										
	27	油品销售企	业施工安	全管	理的	主要问	题与对	策…	•••••	•••••	邹秀	\$健
	30	支线机场油厂	库施工改:	造的	安全	管理…	康	Fe	张文	に辉	张	瓅
	经	营管理										
	34	一体化石油	•	. –								
			• • • • • • • • • • • • • • • • • • • •	•••••	•••••	•••••	•••••	• • • • • •	•••••	•••••	孙明	色佳
	39	构建廉洁工	程招标体	系的	措施	•••••	• • • • • • • • • • • • • • • • • • • •	•••••	•••••	•••••	谢玛	♦玲
	41	加油站建设了	项目全生	命周	期管	理模式	•••••		王全	上明	焦纠	住衡
报道及其他												
	18	2021 年第 3	期广告目	次								

《石油库与加油站》杂志 2020 年合订本征订启事



#### OIL DEPOT AND GAS STATION

Bimonthly, Started Publication in 1992 Vol. 30, No. 3 No. 175 totally Jun 20, 2021

Honorary Chairman of Editorial Committee; Zhao Rifeng, Xia Shixiang

Chairman of Editorial Committee: Zhang Yi

Vice Chairman of Editorial Committee: Tong Dejiang, Wang Liang, Wang Weimin

**Special Consultamts:** Xu Weidong, Ye Huiqing, Di Chunyu, Wang Shunjiang

Members: Li Yuxing, Xu Yufeng, Hong Wei, Xu Fubin, Zhao Xunben, Qin Maowei, Nie Shibang, Zhu Jiande, Wang Zhikun, Wang Qin, Zou Enting, Guo Ziqiang, Cao Xiaopan, Li Yiqing, Lu Pinbao, Huang Liuxiong, Shi Jinxian, Fu Tao, Huang Bingli, Zhao Dayi, Xu Hailin, Li Qingjie, Liu Huabin, Tan Yi, Zhong Wei, Tian Shuyuan, Yang Zhen, Feng Peiyu, Feng Yufei, Wang Fei, Qian Jianhua, Shen Lihu, Xu Yongsheng, Liu Sheng, Fu Yibo, Jiang Ning, Bu Wenping, Gao Jinsong, Xie Yun, Du Daolin, Shen Qingqi, Zhou Jiaxiang, Han Jun, Jin Wangang

Director: Zhang Yi

Vice Director: Tong Dejian Editor-in-Chief: Wang Liang

Vice Editor-in-Chief: Jin Wangang

Editor-in-Charge: Qi Fengyun

Responsible Department: China Petrochemical

Corporation (SINOPEC)

**Sponsor:** SINOPEC Sales Company

Publisher: Editorial Office of Oil Depots and Oil Stations Distributor (Domestic): Editorial Office of Oil Depots and Oil Stations

Address: Building No. 6, Guangqujiayuan, Dongcheng

District, Beijing **Postcode**: 100022

**Tel**: (010) 67006041; 67006042

Fax: (010) 67006043 E-mail: sykjyz@ vip. sina. com

**Distributor** (Abroad): China National Publication Import & Export Corporation

Printer: Jia Yi Printing Co. Ltd of Langfang

Address: Nan xin zhuang village, qiu zhuang township. Langfang

Postcode: 065000

ISSN 1008-2263; CN11-3945/TE

No. of Ad. License: 20170081, Dongcheng Dis-

trict, Beijing

Domestic Price: RMB90 per year

Copyright gor all originally published reports.

**Contents and Abstracts** 

#### STORAGE TECHNOLOGY

1 Selection and Installation Technology of Anti – Seepage Tank (Basin) in Gas Station. Li Zhongjie, Liu Wei, Chen Ziru, Zhang Cheng, Chen Yi, He Congjun.

Abstract: According to the national standards Code for design and construction of filling station (GB 50156 - 2012, 2014 Edition)" and " Standard for pollution control of gas station seepage and leakage (draft for approval)", based on the brief introduction of the material characteristics of commonly - used high density polyethylene (HDPE), fiber reinforced plastics (FRP) and sheet molding compound (SMC), and the structural characteristics of the anti - seepage tank (basin) for fuel dispenser, the selection and installation process of the anti - seepage tank (basin) and the sealing for fuel dispenser are described in detail, so as to provide reference for the correct installation and construction of the anti seepage tank (basin) for fuel dispenser, and the anti - seepage reconstruction in gas stations.

**Key words:** fuel dispenser, anti – seepage tank (basin), installation, process, introduction.

#### GAS REFUELING STAION

4 Development and Layout of LNG Station Network for Vehicle Refueling. Huang Fei.

Abstract: The development status of China's vehicle LNG industry in recent years, such as the rapid growth of LNG vehicles, the increasing development space of vehicle LNG refueling network, the continuous improvement of vehicle LNG resource supply capacity, and the steady rise of vehicle LNG consumption are briefly described. The problems in current development of vehicle LNG station network are pointed out, viz. the impact of new energy industries such as electric energy and hydrogen energy, the long construction cycle of LNG refueling station, the restrict on rapid development of vehicle LNG business by bottleneck of warehousing and logistics, and the lagging development of LNG refueling network in key areas. The developing layout of vehicle LNG station network are proposed, such as, revitalizing assets to optimize LNG refueling function of stations, taking

multiple measures to promote the construction of LNG refueling corridor, digging deeply into customers and providing skid mounted LNG refueling equipment, joint venture and cooperation to expand the construction of LNG refueling station network, speeding up LNG point supply business according to local conditions, and guaranteeing the supply to improve the storage service capacity of outlets.

Key words: vehicle LNG, network, development, layout, ideas.

#### OIL AND GAS PIPELINE

8 Common Problems in Operation of Oil Product Pipeline and Countermeasures. Zhu Ying.

Abstract: According to the common problems of pressure (differential pressure) transmitter, servo level gauge, mass flowmeter, mixing pump, pipeline pig and other equipment in the operation of an oil product pipeline in Central China, combined with practical work experience, the working principle of each equipment is briefly introduced, and the specific solutions are given respectively, At the same time, some suggestions are put forward to ensure the normal operation of the equipment, which can provide a guarantee for normal operation of oil product pipeline.

Key words: oil product, oil transportation, pipeline, equipment, problems, solutions, measures.

#### INFORMATION TECHNOLOGY

12 Application of BeiDou Navigation Satellite System in Skid Mounted Gas Station. Dou Mingyuan, Zou Shuai, Li Haoming, Liao Xiaohua, Feng Qing, Huang Fuchuan.

Abstract: The concept and characteristics of skid mounted gas station and BeiDou navigation satellite system (BDS) are introduced respectively, the difficult supervision problems of some remote skid mounted gas stations are pointed out, and the application scheme of BDS in skid mounted gas station is put forward. The application of this scheme can realize big data analysis and grid connection management, reduce enterprise operation cost, improve enterprise benefit, and realize remote monitoring of safe operation of remote skid mounted gas station.

Key words: BeiDou navigation satellite system, skid mounted, gas station, application.

#### **ENVIRONMENTAL PROTECTION**

15 Implementation of Carbon Inventory in Oil Sales Enterprises. Xiao Fang.

Abstract: Based on the brief introduction of the definition of carbon inventory and the purpose, significance, function, standard and method of enterprise carbon inventory, the working process of

carbon inventory, the construction of carbon asset management system platform and the analysis of carbon emission of an oil product sales enterprise are described, which can lay a good foundation for the enterprise to comprehensively control greenhouse gas emission.

**Key words:** oil sales enterprise, carbon inventory, method, implementation, introduction.

#### **QUANTITY AND QUALITY MANAGEMENT**

19 Development of a New Automatic Verification Device for Refueling Gun. Zhao Miao, Song Shugu, Wei Kai, Li Zhong, Tian Qin, Han Zhonghua, Wang Xuebing.

Abstract: Aiming at the problems of complicated operation, poor accuracy of manual data recording, low verification efficiency of traditional verification device for refueling gun, and insufficient measurement accuracy, inconvenient power supply, stationary type, low integration and inconvenient communication of the existing automatic verification device, a new type of intelligent automatic verification device for refueling gun is designed. The device has the characteristics of high measurement accuracy, rechargeable battery power supply, high integration, portability, and data uploading by mobile phone, and so on. The whole set of equipment has obtained the explosion - proof certificate, and the design accuracy can meet the requirements of less than 0. 05%. The whole set of obtained the complete machine equipment has calibration certificate from Shandong Institute of Metrology, which can be applied to the regular verification of refueling gun in gas station.

Key words: new type, refueling gun, automation, verification, device, development.

23 Calculation Method of Tank Bottom Quantity by Geometric Method. Wang Songwu.

Abstract: Aiming at the complex problem in calculating the bottom amount of irregular tank using geometric method recommended by the standard "Verification regulation of vertical metal tank capacity (JJG168 – 2018)", according to the principle and algorithm of regulation measurement, the local deviation of the formula is improved and verified, and the solution is given to improve the accuracy of the calculation method.

**Key words:** oil depot, storage tank, tank bottom, bottom quantity, calculation, method.

#### SAFETY MANAGEMENT

27 The Main Problems of Construction Safety Management in Oil Sales Enterprises and Countermeasures. Zou Xiujian.

Abstract: Aiming at the problems of construction

projects in oil sales enterprises, such as many points, wide area, and long line, less engineering quantity and investment, lack of effective supervision on site, weak safety awareness of construction lack of pertinence of construction personnel. scheme, lack of strict implementation of equipment entry acceptance system and negligence of epidemic prevention and control. the corresponding countermeasures are put forward, viz. improving construction safety and epidemic prevention and control, perfecting construction on - site monitoring, promoting the contractor 's HSSE management system, improving management of direct operation, and implementing seriously accountability and responsibility to ensure construction safety.

Key words: oil sales enterprise, engineering, construction, safety, problem, countermeasures.

30 Safety Management in Construction of Oil Depot for Regional Airport. Kang Yang, Zhang Wenhui, Zhang Li.

Abstract: In order to adapt to the continuous growth of aviation oil business in regional airports, it is urgent to transform the existing oil depots in regional airports. The current situation of oil depots in regional airports, the characteristics of small annual refueling volume and storage capacity and weak personnel are briefly introduced, and the necessity and difficulties of transformation of oil depots in regional airports are pointed out. The safety management measures in the preparation stage and construction process are put forward, which can provide a reference for the safety management of transformation of oil depot in regional airport.

Key words: regional flight, airport, oil depot, construction, transformation, safety, management.

#### OPERATION MANAGEMENT

34 Performance Survey in 2020, Transformation Measures, Thinking and Suggestions of Integrated Oil Companies. Sun Xiaojia.

Abstract: Based on a brief description of the macro environment of the global petrochemical industry affected by the epidemic in 2020, the operation status of major international integrated oil companies such as ExxonMobil, Shell, BP, Total and Chevron are analyzed from the aspects of important financial indicators, main business and non – traditional oil and gas business in 2020. The transformation measures of major integrated oil companies at home and abroad to low – carbon new energy enterprises are introduced, and some suggestions are put forward for the future development of integrated oil companies from the perspective of the balance

between investment and return and the test of transportation and management capacity.

**Key words:** integration, oil companies, 2020, performance, introduction, transformation, measures, suggestions.

39 Measures of Building a Clean Project Bidding System. Xie Lingling.

Abstract: The measures for SINOPEC Jiangxi Oil Product Company to build a clean project bidding system are introduced, such as paying attention to the source control to achieve full coverage of the project, paying attention to transparent examination and approval to achieve the whole channel process online, paying attention to the text standard to achieve the full application of the framework agreement, paying attention to the process control to achieve the full embedding of supervision and balance. And the achievements are pointed out: the corruption risk is solved in the field of project bidding, the legal compliance management system is improved, the integrity engineering construction system is perfected, which can lay the foundation for the integrity engineering construction.

Key words: petrochemical sales enterprise, integrity, engineering, bidding, construction, measures.

41 Life Cycle Management Mode of Construction Project in Gas Station. Wang Quanming, Jiao Weiheng.

Abstract: According to the national standard " Code for design and construction of filling station (GB 50156 -2012, 2014 Edition)" and the relevant regulations of SINOPEC sales enterprises, the grade division of the construction scale of the first to third level gas stations and the division standards of the construction of the four types of gas stations, namely, high - quality, standard, basic and simple, are briefly introduced. It is pointed out that the construction of gas station project has many examination and approval procedures, long processing period, small project scale, but involving many specialties, high construction quality requirements and construction safety risks. contents of life cycle management mode of gas station construction are described in detail from five stages of project prophase, project definition, implementation, project completion and trial production, and post evaluation, the influencing the construction period of gas station construction project are analyzed, and measures to speed up the investment of gas station construction project are put forward, so as to provide a basis for high - quality construction of gas station.

Key words: gas station, construction, project, whole life, cycle, management, mode.

富仁高科・豪升・能源站・管家服务

# 致力于更好的能源零售终端





加油机



咨询热线: 0510-86105873

能源服务 • 自主创新 • 诚信消费 • 安全环保 •







江阴市富仁高科股份有限公司 Jiangyin Furen High-Tech Co.,Ltd

> 地址: 江苏省江阴市新园路8-6、8-7号 网址: www.furentech.com 全国服务热线: 400-887-1900

标准连续出版物号:

ISSN1008-2263 CN11-3945/TE

广告许可证号: 京东工商广登字20170081号

定价: 15.00元 全年: 90.00元