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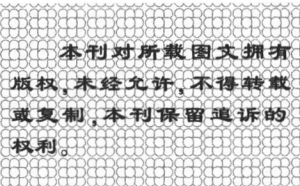
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Contents and Abstracts

STORAGE TECHNOLOGY

1 Application Practice of Anti - Corrosion Technology for Oil Product Storage Tanks in Coastal Areas. Gao Bin

Abstract: In view of the situation that the oil product tanks in coastal areas are prone to corrosion due to factors such as ambient air temperature, humidity, chloride ion concentration, and ultraviolet intensity, which may lead to oil leakage, or even production safety accidents and environmental pollution events, based on a brief introduction of the current research situation of the corrosion mechanism of the outer wall of steel tanks in China, the impact of the environmental conditions in coastal areas on steel corrosion is analyzed. The selection principle and performance of common anticorrosive coatings for steel tanks are introduced, and the construction process, technical index requirements and quality control points are put forward, which can provide a reference for the construction of similar projects.

Key words: coastal areas, oil product, steel tanks, anti - corrosion, technology, application, practice.

4 Promotion and Application of Explosion - Proof Hanging Basket in Oil Tank Construction. Yan Chengxin.

Abstract: The structure, application and existing shortcomings of the common hanging basket and scaffold used in the construction of oil tanks in the oil depot are pointed out, the concept, characteristics, working principle, technical parameters, installation, application and precautions of the explosion - proof hanging basket are introduced, and the construction benefits of the explosion - proof hanging basket and the scaffold are compared from the aspects of construction period and engineering costs. Explosion - proof hanging basket is used in oil tank construction, which is low - cost, labor - saving and safe, which is recommended to be popularized.

Key words: oil depot, oil tank, construction, explosion - proof hanging basket, promotion, application.

OIL AND GAS PIPELINE

8 Failure Risk Analysis and Control of Pressure Pipeline in Oil Depot. Gao Qi, Zhao Zeyu

Abstract: In view of the safety and environmental risk management and control of pressure pipelines in the petroleum and petrochemical industry, the failure factors of pressure pipelines in an oil product depot were systematically evaluated using fault tree analysis (FTA) method. According to the risk identification method, the oil leakage of the pressure pipeline in the oil depot is assessed as a high risk. For seven types of failure risk factors such as pipeline welding defects, internal and external stress effects, risk control measures such as sacrificial anode protection, fixed - point pressure monitoring, and

periodic detection of failure factor superposition areas were taken, and good results of safety and environmental risk degradation management were achieved.

Key words: oil product, oil depot, pressure pipeline, failure, fault tree analysis, risk identification method, risk control.

13 Risk Assessment of Oil Mixing and Cutting Operation of the East Subei Pipeline. Yang Guang

Abstract: On the basis of a brief introduction to the general situation of the East Subei oil product pipeline and the oil mixing and cutting operation scheme, the risk assessment matrix (RAM) method was used to establish the risk assessment model for the oil mixing and cutting operation of the East Subei pipeline, and the risk was assessed. The initial risk level of each risk point was confirmed to be Level I to Level III. After implementing the relevant management and control measures, Level III risk can be eliminated or degraded, and the risk level is controllable, which can be used as reference for safe operation of oil product pipeline transportation.

Key words: oil product, pipeline, East Subei pipeline, transportation, oil mixing, cutting, risk, assessment.

INFORMATION TECHNOLOGY

16 Some Thoughts on Intelligent Supervision of Construction and Transformation of Refueling Stations. Wang Wen.

Abstract: In response to the problems existing in the current construction and renovation of refueling stations, such as the difficulty of supervising construction personnel, the complexity of the construction and renovation environment, the shortage of construction supervision personnel, and the backwardness of construction supervision equipment, an intelligent refueling station construction supervision platform integrating data collection, processing, and analysis feedback is created by utilizing the existing video monitoring platform of refueling stations, integrating information technology, the Internet of Things, and cloud computing technologies. Through the platform, multi-functional information and data are integrated, such as construction personnel management and training, construction equipment management, construction environmental supervision, risk early warning and alarm, voice call, electronic work ticket system, and contractor score assessment system, to achieve functional service systems such as intelligent perception, data transmission, analysis, and application, further compact the implementation of construction and transformation supervision of refueling stations, and provide a basis for leadership decision-making.

Key words: refueling station, construction, transformation, intelligence, supervision, thought.

SAFETY TECHNOLOGY

19 Research and Application of Static Electricity Monitoring System for Gas Stations Based on Internet of Things (IoT). Li Rong, He Ying.

Abstract: In response to the current situation where the number of workers employed in gas stations is

limited, safety management and control continue to upgrade, and the traditional method of manually detecting the static electricity conductivity of gas station equipment cannot meet the current management needs, based on a brief introduction of the sources of static electricity generation in gas stations, the accumulation and release of static electricity, the main methods and measures for preventing static electricity, the reliability check of static electricity conductivity, and the principle of static electricity conduction detection, a solution for static electricity monitoring based on the Internet of Things (IoT) is proposed for the two key links of conducting static electricity, achieving all-weather monitoring and control of refueling guns and unloading grounding. The system has a high degree of integration, including data storage, query, and transmission functions, abnormal alarm prediction functions, and linkage control functions. It can provide convenient operations for gas station management personnel, reduce management costs such as human and material resources consumed in daily patrols, and improve the digital and intelligent level of gas station management.

Key words: gas stations, static electricity, detection, system, research, application.

QUANTITY AND QUALITY MANAGEMENT

23 Discussion on Evaluation Method of Laboratory Capability of Petroleum Products. Liu Zhi.

Abstract: Generally, the verification and evaluation of the laboratory capability of petroleum products are carried out through the comparison test between laboratories and relying on the results of statistical analysis data to evaluate the laboratory testing ability, resulting in a simple testing method, which cannot comprehensively reflect the laboratory testing ability. It is proposed to combine the laboratory comparison test with the on-site ability evaluation, the technical level of laboratory personnel, the ability of laboratory principals and other factors to score and rank, so as to get a more comprehensive evaluation method of laboratory testing ability. Through the application in the verification and evaluation of the laboratory testing ability of a company, this method can objectively and truly reflect the testing ability of the laboratory, by which the satisfactory results are achieved.

Key words: petroleum, oil product, laboratory, detection, ability, evaluation, method, discussion.

27 Analysis on Causes of All Link Loss in Early Stage of Oil Input at the Wharf of Oil Product Depot. Zhang Zhen.

Abstract: The reasons for the whole link loss in the initial stage of oil input after the upgrading and transformation of the wharf of an oil product depot is analyzed; firstly, the flowmeter takes the air; secondly, the flowmeter is affected by pipeline vibration; thirdly, the delivery link is not sealed, unable to provide formal data and affected by the wind and waves on the river; fourthly, natural loss during shipment and unloading; fifthly, the accuracy of flowmeter is insufficient; sixthly, the structure of oil

tanker is complex. To this end, the solutions are put forward; the first is to strengthen communication and coordination; the second is to strengthen wharf management; the third is to carry out third-party technical diagnosis; the fourth is to organize the quantity comparison of the whole process to ensure the accurate measurement of oil quantity.

Key words: oil depot, wharf, transformation, oil input, initial stage, oil products, loss, causes, analysis, countermeasures.

SAFETY MANAGEMENT

29 Cause Analysis and Countermeasures of Safety Incidents in Refueling Stations. Hua Lichao.

Abstract: In view of the situation that safety incidents often occur due to the increase in the business status of refueling stations and their continuous transformation into integrated energy supply stations such as LNG, CNG, hydrogen refueling, power charging and replacement, and photovoltaic power generation, the reasons for safety incidents in gas stations are pointed out. Firstly, the risk awareness is insufficient; secondly, the safety training did not play a real role; thirdly, the security measures are not implemented and there is a fluke mentality; fourthly, there are safety problems in equipment and facilities, and no effective risk analysis has been conducted; fifthly, the emergency response capacity is slightly insufficient. And the countermeasures to avoid safety incidents are proposed: The first is to supervise the implementation of the HSE safety system and cultivate safety culture; the second is to improve the selection and ability training of safety related personnel; the third is to eliminate potential safety hazards of equipment and facilities; the fourth is to pay attention to improving employees' ability to deal with emergencies.

Key words: refueling station, safety, incident, occurrence, cause, analysis, countermeasures.

32 Discussion on the Formation of Safety Habits in Gas Stations. Huang Lihui.

Abstract: The importance of habits, the current situation of gas station safety, and the importance, necessity, and urgency of safety habits are pointed out, the principle of habit formation is introduced, and the principles that should be followed in the formation of gas station safety habits are proposed, which can provide a reference for the cultivation of good habits in gas stations.

Key words: gas station, safety, habits, cultivation, measures.

OPERATION MANAGEMENT

34 Consideration on Digital Transformation of Compensation Management in traditional Energy Enterprises. Wang Di

Abstract: The unbalanced salary structure, unfair salary distribution, irregular distribution order, and imperfect indicator design in some traditional energy enterprises' salary management are briefly analyzed, the necessity and significance of digital transforma-

tion of energy enterprises' salary management are pointed out, and the ideas for digital transformation are proposed: the first is to develop thinking breakthrough capabilities, the second is to improve the salary management system, the third is to innovate salary management methods, the fourth is to enable salary incentive mechanism, and the fifth is to optimize the salary supervision system. At the same time, it is pointed out that the digital transformation process of compensation management in energy enterprises should be based on the actual situation of the enterprise, the selection of transformation strategies is more important than the selection of technology, and data quality must be ensured.

Key words: tradition, energy, enterprise, compensation, management, digitization, transformation, consideration.

37 Interpretation of "Personal Information Protection Law" and Prevention and Control of Corporate Legal Risks. Liu Xiaofei.

Abstract: The connotation and extension of personal information in the "Personal Information Protection Law" and the main scope of personal information protection are introduced, the legal liability for violations of personal information protection is pointed out, and the suggestions for petroleum and petrochemical enterprises in preventing and controlling risks related to personal information protection are put forward: the first is to observe the principles of minimum impact, minimum scope, and minimum time to collect personal information data, the second is to improve platform governance and clarify rule boundaries, the third is to standardize outdoor monitoring to protect customer rights and interests, the fourth is to standardize business cooperation and avoid indirect violations, the fifth is to improve internal mechanisms and strengthen safety supervision, and the sixth is to fulfill social responsibilities and accept external supervision.

Key words: personal information protection law, connotation, extension, interpretation, enterprise, law, risk, prevention and control.

40 Innovation in Construction and Operation Management of Smart Gas Stations. Zhang Caihui.

Abstract: The concept and characteristics of smart gas stations is briefly introduced, the system architecture, functional structure, intelligent hardware equipment, intelligent information system, and intelligent marketing for building smart gas stations are described in detail, and the innovative methods for business management are proposed such as expanding channels, optimizing resource allocation, and convenience store business, and emphasizing the cultivation and maintenance of good customer relationships, which can provide a reference for the construction and operation management of smart gas stations.

Key words: intelligence, gas station, construction, operation, management, methods, introduction.

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