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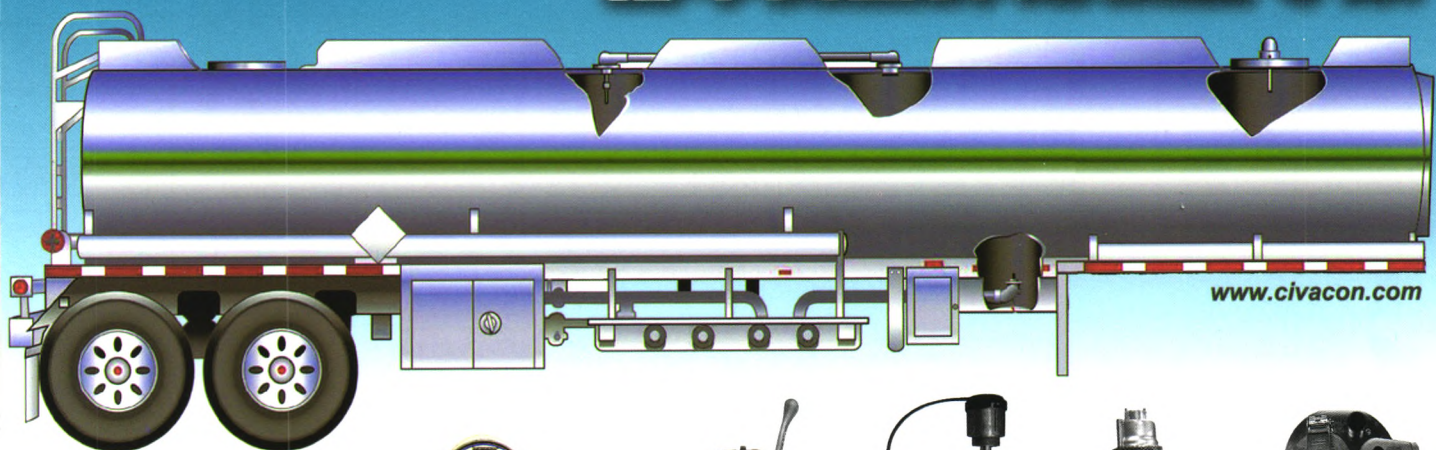
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1 Application of Frequency Conversion Technology in the Design of Loading System of Oil Depot. Zhang Jiacheng, Liu Yi, Hu Naike, Jiang Hao.

**Abstract:** With the development of a series of large and medium - sized oil products depots, the loading system shows the features of large scale, large amount, and concentrated operation, and the frequency conversion technology has been applied in loading system. Combined with the experience in design of loading system in large oil depots and practical operation results in recent years, the selection of frequency conversion mode, determination of basic parameters, control scheme and other content of frequency conversion technology for loading system are discussed, the design method of frequency conversion technology for loading system is summarized, and the problems needing attention in the design of frequency conversion technology are expounded.

**Keywords:** oil product depot, truck loading, frequency conversion technology, design method.

4 Modification and Effect of Oil Unloading Operation and Drainage Technology in Huangpu Oil Depot. Luo Shijin.

**Abstract:** The modification of ship unloading operation and drainage technology in Huangpu oil depot was introduced. According to the problems existing in the original drainage process, such as dispute measurement, operation overtime, high labor intensity, large sewage discharge, and high energy consumption of wastewater treatment, the existing unloading pipeline was optimized by circulating pipeline, so as to achieve the accurate measurement, loss reduction, decreasing sewage discharge and reducing the energy consumption of the wastewater treatment.

**Keywords:** ship unloading, circulating system, modification, benefit.

7 Innovation and Application of Field Machining Method of Spherical Roof of Atmospheric Storage Tank. Zhang Haichao

**Abstract:** According to the experience of field machining of spherical roof in a construction project, a simple and applicable field machining process of thick wall spherical roof was summarized, which could provide reference for similar engineering project.

**Keywords:** atmospheric storage tank, spherical roof, field machining.

9 Construction Practice of Bottom Replacement of Vertical Steel Oil Tank. Li Xiaoyue, Tang Tao, Yang Shuxun, Yue Yukun.

**Abstract:** Combined with the construction practice, the construction technology and quality control points in the bottom reconstruction of a 2000m<sup>3</sup> oil tank using composite tank bottom method were described, with a view to play a certain reference role in the future construction of tank bottom.

**Keywords:** oil tank bottom replacement, construction process, quality control.

## OIL AND GAS PIPELINE

11 Research on Oil and Gas Pipeline Risk Assessment Method in China. Li Jiajun, Chu Feixue, Gao Tengyu, Yu Qiyong.

**Abstract:** the domestic and foreign risk assessment of oil and gas pipeline transportation methods and research breakthroughs were introduced, the commonly used qualitative, semi quantitative, and quantitative evaluation methods were summarized, and their applicable scope and the advantages and disadvantages were pointed out. The relevant technology of pipeline risk assessment was prospected, which could provide reference for risk assessment decision makers.

**Keywords:** pipeline, risk assessment, qualitative, quantitative.

16 Optimization of Sequential Transport Operation of Wuhan—Xinyang Oil Products Pipeline. Xie Shiwei, Zhao Yong, Zhou Cong, Qiu Hao.

**Abstract:** To ensure the sequential transport operation of Wuhan—Xinyang oil products pipeline more optimized, on the basis of oil products pipeline hydraulic characteristics and sequential transport theory, the pipeline operation data, such as critical Reynolds number, critical flow, the mixed oil quantity, initial oil mixing length, batch throughput,

were calculated and analyzed. The results show that the critical Reynolds number (Rec) is 45590, the critical flow rate (Qc) is 228 m<sup>3</sup>/h; under the common conditions, the calculated the oil mixing length (I) in terminal station at Xinyang is 932.6 m, and the mixed oil volume (V) is 70.9 m<sup>3</sup>, which are close to the actual quantity of oils downloaded; when the initial oil mixing length  $C_0 \leq 150$  m, the initial mixed oil quantity formed in the first station has small impact on the total mixed oil quantity; gasoline end point affects greatly the batch throughput, which should be adjusted according to the quality of oil products injected into the first station.

**Keywords:** Wuhan—Xinyang pipeline, operation optimization, critical flow, mixing length, batch throughput.

## INFORMATION TECHNOLOGY

19 The Problems of Information Construction in Gas Station and Countermeasure. Ding Tao

**Abstract:** Some problems of the information construction in gas station were pointed out, such as low degree of automation in terminal data acquisition, decentralized information systems, insufficient combination of information with business process reengineering, deficient secondary development of system, lack of information knowledge for basic employee etc. Accordingly, the countermeasures were presented including establishment of station data center, building station information platform, paying attention to process reengineering, deepening system application, strengthening information team construction and training of personnel on basic level.

**Keywords:** gas station, information, problem, countermeasure.

22 Application and Analysis of Gas Station Capital Management System Jiang Hai

**Abstract:** Starting from the capital management links including light oil sales, refueling card charge, prepaid card sales, and non-oil sales in gas stations, constructing the prevention and control system of gas station funds using information technology was proposed. Through constructing funds supervision platform, the objectives of monitoring cash flow, reducing manual intervention, reducing labor force were achieved.

**Keywords:** gas station, capital return, automatic reconciliation, financial monitoring.

## QUANTITY AND QUALITY MANAGEMENT

26 Analysis of Aniline Compounds in Vehicle Gasoline. Zhang Li, Wang Chao, Wang Shoucheng, Wang Fujiang.

**Abstract:** The high nitrogen containing gasoline samples found in market were analyzed using gas chromatography, gas chromatography – mass spectrometry, infrared spectroscopy, chemiluminescence and other methods for the qualitative and quantitative determination of nitrogen compounds. It was confirmed that the samples contained aniline class additives, which were hazardous additives banned by the national standards of vehicle gasoline to be added into gasoline artificially. But the standards did not provide the test methods and limit values of nitrogen compounds. This paper introduced the harm of aniline compounds to gasoline, human and environment, analyzed the detection method of nitrogen content in aniline compounds in gasoline, proposed the vigilance on artificial addition of aniline compounds to gasoline on the market, and put forward the advice of supplementing test methods and limit values of nitrogen compounds into the gasoline standards.

**Keywords:** vehicle gasoline, standard, aniline, limit, analysis method.

30 The Remote Parameter Management of Measuring Instrument and Equipment of Oil Depot. Zhao Xingwei

**Abstract:** Aiming at the shortcomings of oil depot management, the importance of remote parameters management of oil depot measuring instrument and equipment was explained, and the influence factors of instrument measuring accuracy, calibrating method of the measuring instrument were introduced. The remote management mode, equipments structure and calibration procedures of measuring instrument calibration, and formulation of the calibration management system were emphasized.

**Keywords:** oil depot, self – control equipment, remote, parameter management.

## SAFETY MANAGEMENT

34 Analysis on Hidden Danger in Oil Storage Tank Area. Liu Yutang.

**Abstract:** According to the accident – prone situation of oil tank area in recent years, the reasons of hidden dangers were analyzed, such as over – proof of the combustible gas between the first sealing and

the second sealing of floating roof tank, decreased function of fixed fire facility, constant form of fire fighting exercise, deficiency of employee sense of ownership and technical quality. And the corresponding corrective measures were put forward according to the requirement of “strict management year” of the SINOPEC Group in 2014.

**Keywords:** oil tank area, hidden danger, improvement measures.

37 Discussion on the Teams Safety Management in Oil Depot. Sun Yanni.

**Abstract:** Aiming at the existing problems in the team safety management of oil depot, the causes of the problem were analyzed, the corresponding improvement measures were put forward, in order to further strengthen team safety management and ensure the safe operation of oil depot.

**Keywords:** oil depot, team, safety management.

## OPERATION MANAGEMENT

40 Thought on Construction and Layout of Oil Sales Network for Competition in County Scale. Zhang Rong.

**Abstract:** The paper analyzed and discussed how to deal with the current gas station distribution network construction in county scale from five aspects, and proposed that the major retail network in county scale petrochemical market should be constructed by the measures, such as keeping city and holding junction, occupying areas and controlling points, integration and selecting location, so as to ensure the leading position of Sinopec on the oil products market in the county scale.

**Keywords:** county scale, gas station, network construction, layout

42 Review and Discussion on the Training Scheme for Gas Refueling Station Masters. Wu Jinlin, Xuan Lijun.

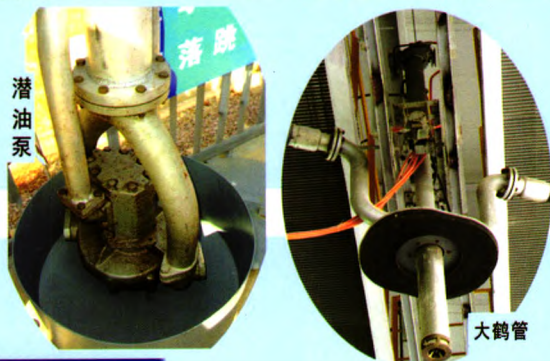
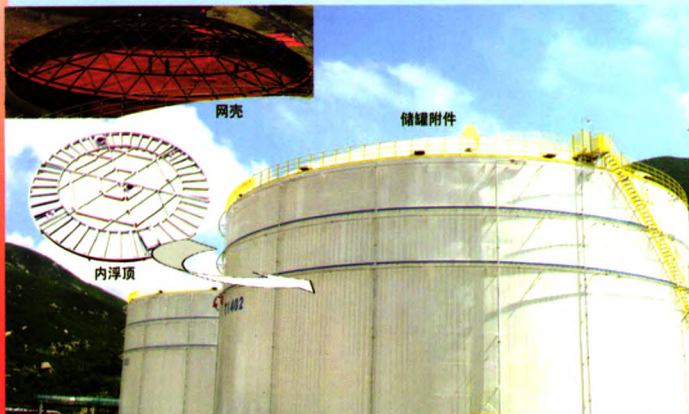
**Abstract:** The training scheme of gas station masters was briefly introduced. Through years of training and evaluation questionnaires of trainees, colloquia exchange, and survey around gas stations, based on the analysis and evaluation of the investigation results, a more practical adjustment of training scheme for gas station masters was proposed.

**Keywords:** natural gas; gas station; station master training; training scheme.



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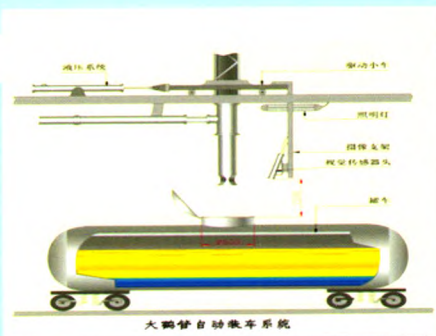
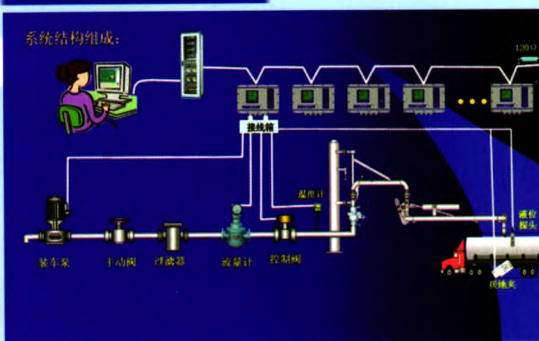
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