

Cnpc engineering hydrogen gas storage bottle

What is the development status of high-pressure gaseous hydrogen storage equipment in China?

This article reviews the current development status and challenges of high-pressure gaseous hydrogen storage equipment in China. With regard to stationary vessels, China has introduced an innovation in the form of a multifunctional layered steel vessel to reach a good balance between hydrogen embrittlement control and cost management.

Why is compressed hydrogen stored in lightweight composite cylinders?

Compressed hydrogen stored in lightweight composite cylinders, enables increased payload and large-scale storage and transportation. To ensure highest quality standards, our manufacturing facilities are certified according to ISO 9001:2008 and IATF 16949:2016, whereas our tanks comply with various international standards.

What is the ideal storage pressure for on-board hydrogen supply systems?

Considering factors such as compressed energy consumption, driving range and infrastructure construction investment, the current ideal storage pressure for on-board hydrogen supply systems is 35 and 70 MPa. Secondly, the filling speed requirements for HPGH 2 cylinders are relatively high.

How do you store hydrogen on a ship?

The common methods to store hydrogen on-board include the liquid form storage, the compressed gas storage, and the material-based storage, and the working principles and material used of each method have been reviewed by Zhang et al. and Barthelemy et al. .

What are hpgH2 cylinders used for?

HPGH 2 cylinders are mainly used for hydrogen energy traffic, and are most widely used in the field of fuel cell vehicles. In addition to the fundamental characteristics of hydrogen storage equipment, HPGH2 cylinders possess their own distinctive features.

What is the design pressure of a hydrogen cylinder?

The design pressure of these vessels is gradually increased to 40-50 MPa to accommodate the requirements of hydrogen energy development. The common specifications include a cylinder diameter of approximately 406-610 mm and a wall thickness of approximately 40-60 mm.

(Yicai) March 21 -- China Petroleum Engineering Corporation, the country's largest oil and gas supplier, has put into operation the initial phase of its first project ...

As one of the leading enterprise in natural gas equipment industry in China, our engineering staff are most knowledgeable experts, some are with decades of ...



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On August 8, CNPC's first demonstration project of large-scale hydrogen production from renewable energy was launched in Yumen Oilfield. Under this project, the abundant solar ...

Since the 13th Five-year Plan, CNPC has made a series of innovative achievements in electrochemical energy storage, such as lithium titanate battery, aqueous zinc ion battery and flow battery, and ...

Taking natural gas as a strategic, growing and value-added project, CNPC keeps strengthening natural gas exploration and development, developing unconventional natural gas such as tight gas, shale ...

Due to the technical complexity of the liquid form storage and the material-based storage, the current FCEVs are dominated by the compressed hydrogen gas system, which stores ...

Second, we make good use of our abundant wind, solar and geothermal resources, promote the integrated development of wind, solar, gas and electricity and the industrialized utilization of hydrogen ...

The 2022 Domestic and International Oil and Gas Industry Development Report compiled by CNPC Economics & Technology Research Institute (CNPC ETRI), one of China Top Think Tanks, was ...

Sichuan Shale Gas Project Department of CNPC Great Wall Drilling Engineering Co., Ltd., Chengdu, Sichuan, 610051, China Key Words: Hydrogen storage vessels; Hydrogen pipes; Hydrogen ...

The company strives to build a "low-carbon energy ecosystem" featuring integrated development of fossil and clean energies. So far, CNPC has built 1,305 PV and storage stations, 718 ...

erground gas storage. China has long been dependent on imported tools in this area. Through years of continuous efforts, CNPC has innovated a high-precision magnetic positioning technique to locate the ...

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Hydrogen Energy In 2024, in line with the market demand for hydrogen energy, the Company accelerated the construction of hydrogen supply centers near its refining and chemical facilities to ...

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In the field of on-board cylinders, Type IV cylinders have been successfully developed and used. The current research focus is on large-capacity Type IV cylinders used in heavy-duty ...

age, and hydrogen energy. It will also accelerate the construction of new energies demonstration projects in oil and gas fields and help CNPC implement its green and low-carbon strategy as well as ...

Fossil fuels comprising coal, crude oil, and natural gas are non-renewable and greatly harmful to the environment. Hydrogen, on the other hand, is bot...

At present, Sichuan Petrochemical is supplying fuel cell hydrogen products to the Chengdu market at a capacity of about 1000 kg per day. It has become PetroChina's second ...

Gaseous Storage Systems Cylinders - Hydrogen cylinders should be stored outside at a safe distance from structures, ventilation intakes, and vehicle routes, even ...

Chairman's Message I feel pleased to present the CNPC Corporate Social Responsibility Report 2019. The year 2019 was an extraordinary year. It witnessed a number of signi cant historic moments ...

Herein, the major innovation achievements of CNPC in oil-gas field surface engineering were analyzed systematically. The progress of technologies such as oilfield gathering ...

Gas Utilization Oil & Gas Storage Operation & Maintenance Telecommunications and Electricity Oil & Gas Field Facility LNG Processing and ...

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