

عنوان مقاله:

Adsorbed natural gas technology for gas storage: review

محل انتشار:

چهاردهمین همایش بین المللی نفت، گاز و پتروشیمی (سال: 1389)

تعداد صفحات اصل مقاله: 8

نویسندگان:

a rashidi - nanotechnology research center , RIPI

z shamsi - nanotechnology group idea generation center

m ahangar davoodi - nanotechnology group IGC , RIPI

h bargozin - nanotechnology group IGC , RIPI

خلاصه مقاله:

Natural gas is an important fuel in the field of fossil fuels . It is an economic fuel and decreases air pollutant emissions while offering higher octane numbers and therefore , higher thermal efficiency than gasolin or diesel oil. The conventional approaches to natural gas storage are compressed natural gas CNG and liquid natural gas LNG but both have significant drawbacks such as high costs low storage efficiency and public safety concerns . the preferred approach to these two storage methods is adsorbed natural gas ANG on the porous media such as activated carbon, carbon nanostructured , silica gel and zeolites. technology of natural gas storage takes place at a relatively low pressure which is around 500 psi 3.5MPa at room temperature , and avaailable by single -stage compression compared to CNG . also it can provide nearly the same capacity of CNG . natural gas that is charged into a vessel packed with an adsorbent its energy density will be greater than that of the same vessel without adsorbent at the same pressure thus the amount of natural gas that can be stored is increased. the storage pressure of adsorbed .natural gas in large scale and vehicles are under pressures of approximately 60 and 35 bar , respectively

کلمات کلیدی:

.natural gas , adsorption , activated carbon, storage capacity

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/103347>

