

Hydrocarbons Gas storage on activated carbon

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Abstract:

The gas storage in the three activated carbon tested in this study at low pressure (3-4 bars) and 303.15 K to obtain an adsorption capacity about 70 V/V which is an important result compared to those tested by others researchers. The activated carbon tested, present a stability from the third cycle although the loose of efficiency (50%) from the first cycle which is recapitulated with gas regeneration to begin the same behavior and the same capacity which encourage the use of this storage method to vehicle application with an activated carbon from pitch stone activated chemically by ortho phosphoric acid and physically by steam flow which reached its total desorption on the 13th cycle at maximal desorption temperature of 363K near to the radiator-water temperature of vehicles. So this activated carbon can be assimilated as a good adsorbent for gas storage in other tests will be done to investigate the gas impurities to be able to study a unit pilot in a vehicle engine system used this storage method.

Key words: Gas storage, Activated carbon, Adsorption, Butane, Pitch Stones.