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Ginzburg et al.

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(54) **STORAGE SYSTEMS FOR ADSORBABLE GASEOUS FUEL AND METHODS OF PRODUCING THE SAME**

(75) Inventors: **Yuri Ginzburg**, Ginot-Shomron (IL); **Vadim Beilin**, Raanana (IL); **Baruch Foux**, Jerusalem (IL); **Lev Zaidenberg**, Raanana (IL)

(73) Assignee: **ANGSTORE TECHNOLOGIES LTD**, Ashkelon (IL)

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See application file for complete search history.

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Primary Examiner — Frank Lawrence

(74) *Attorney, Agent, or Firm* — Michael J. Feigin, Esq.;
Feigin & Fridman LLC

(57) **ABSTRACT**

A storage system for an absorbing gas including a plurality of briquette units situated within the storage tank is disclosed. In some embodiments, each briquette unit includes a liner or open vessel, and compressed gas-absorbing particulate matter associated with the liner for external support. In some embodiments, the liner or vessel maintains the form of the briquette unit. The liner or vessel do not form a pressure tight vessel, and in some embodiments, the local pressure rating of the liner or vessel is less than the gas pressure within the storage tank. Exemplary gas-absorbing materials include but are not limited to methane and hydrogen adsorbing materials such as activated carbon, zeolite, and other appropriate hydrocarbon gas and/or hydrogen adsorbing materials. Optionally, each briquette unit includes a wrapper for preventing circulation of said particulate matter within the storage tank. Optionally, the storage system includes a mechanism for supplying or removing heat to at least one briquette unit. Furthermore, a method for manufacturing any of the aforementioned gas storage systems is disclosed. Some embodiments of the present invention provide methane-powered motor vehicles including but not limited to automobiles, buses, trucks and ships including a storage system with compressed methane-adsorbing particulate matter.

27 Claims, 8 Drawing Sheets

