

Towards the Hydride Tank for Hydrogen Storage

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ABSTRACT

TiFe-Ni/C-nanotubes alloy was prepared by high-energy ball milling. The alloy was characterized for hydrogen storage purposes by SEM, hydrogen storage capacity/ kinetics and DSC. A 1 kg hydride tank was designed and constructed in stainless steel 316L. This tank operates at room temperature and low hydrogen pressure (15 bar); however the design and construction allows changing the hydride material for higher operational-temperature materials. This hydride tank is our first prototype for mobile applications.

Keywords: hydrogen storage; hydride tank, prototype.

