ENERGY,PROTECTING MAN AND ENVIRONMENT

technology Request

Hydrogen storage systems to generate electricity

(10 TR 98OA 3GJQ)

Abstract

A Turkish company specialized on energy storage systems for renewable system is looking for technology, product, and partner company to develop their systems. It needs technologies for hydrogen storage and usage systems to generate electricity. The company wants to find companies and/or research institutions in order to jointly develop new designs and cooperate in production development.

Description

Energy storage media are matters that store some form of energy that can be drawn upon at a later time to perform some useful operation. Electricity is transmitted in a closed circuit, and for essentially any practical purpose cannot be stored as electrical energy. Renewable energy must be stored in order to make this reliable.

Hydrogen is an important candidate for electricity storage as it is a clean substance and due to the fact that water, the raw material from which hydrogen can be released by means of electricity (electrolysis) for example, is available everywhere. The drawback of hydrogen, however, is that it has a much lower energy density in comparison with petrol for example. One liter of liquid hydrogen, stored at an extremely low temperature (-254 °C) contains one quarter of the energy contained within one liter of petrol. If the fuel cells of the future (that convert the hydrogen into electricity) are going to provide a higher efficiency than the engines of today, we can nonetheless produce interesting systems. Thorough searches are being conducted into new, economical storage methods, in which hydrogen is encased in suitable materials in molecular or atomic form, as a result of which such extreme conditions are not necessary. The company is able to design combined energy systems. On this basis it is planning to adapt new features to their systems by means of supplementary systems, energy storage systems.

Technical Specifications / Specific technical requirements of the request

- Highest quality indicator
- High Efficient Systems
- Low weight
- High return in investment

Valid until: 15/02/2012

For further information (including IPR status) please contact:

Camillo Ferrari

Phone: +39 0732 626.511
Fax: +39 0732 626.939
Email: servizi2@meccano.it