Hollow concrete ball solar container patent

Could hollow concrete balls store solar and wind energy?
A video post on the public television station ZDF called the hollow concrete balls a "possible solution to store solar and wind energy". The gained data helped to understand the project better. For further tests on a bigger scale Christian Dick,also a member of the Fraunhofer IEE team,thinks about constructing a big concrete hollow upon the sea.

What is a hollow concrete sphere?
A hollow concrete sphere with an integrated pump-turbine will be installed on the bottom of the sea. Compared to well known pumped-hydro storage plants, the sea that surrounds the sphere represents the upper water basin. The hollow sphere represents the lower water basin.

What is the maximum capacity of a hollow concrete sphere?
The maximum capacity for the hollow concrete sphere depends on the total pump-turbine efficiency, the installation depth and the inner volume. The stored energy is proportional to the ambient pressure in the depths of the sea.

How does a hollow sphere generate electricity?
When electricity is needed,water from the surrounding sea is guided through the turbine into the cavity,generating electricity. The higher the pressure difference between hollow sphere and the surrounding sea,the higher the energy yield during discharging. While discharging the hollow sphere a vacuum will be created inside.

What does an empty hollow sphere mean?
An empty hollow sphere means a fully charged storage system. When electricity is needed,water from the surrounding sea is guided through the turbine into the cavity,generating electricity. The higher the pressure difference between hollow sphere and the surrounding sea,the higher the energy yield during discharging.

What does a hollow sphere represent?
The hollow sphere represents the lower water basin. The StEnSea concept uses the high water pressure difference between the hollow sphere and the surrounding sea,which is about 75 bar (?1 bar per 10 meters).

The construction-waste recycled concrete hollow block has the characteristics of small density, small volume, high compression strength, good heat preservation effect and good frost resisting ...

Their "StEnSea" (Stored Energy in the Sea) concept involves using hollow concrete spheres on the seabed to store energy. The StEnSea system consists of a hollow concrete sphere ...

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U.S. patent application number 16/900880 was filed with the patent office on 2021-11-18 for flexible hollow objects in a flexible hollow container. The applicant listed for this patent is Karoly ...

Lastly, the preparation process of hollow slab model was put forward for the solar pavement with light guide concrete, and the corresponding hollow slab specimens were prepared with the self ...

The plurality of solar panels are configured to receive sunlight and convert to solar energy for storage in the battery and supply energy to electric vehicles during transport of the container (s).

Direct solar incident energy-based desalting water is a main branch of desalination practice. Solar still, about which much has been written recently, is known by a full history of ...

In various industrial applications where extensive use is made of ball bearings and where total equipment weight is a significant factor, the use of hollow ball hearings has been found highly ...

A rubber composition suitable for producing hollow cores of pressureless tennis balls and superior in rebound properties and feeling of striking balls by racket, which contains, as a rubber component, 30 ...

BACKGROUND ART [0002] In order to obtain appropriate elasticity of hollow balls such as a regulation tennis ball, a soft tennis ball, and the like, the internal pressures of the balls are kept higher than the ...

The present invention relates to hollow plastic containers and, more particularly, to blow molded plastic containers with self-supporting bases. The base has sufficient strength to withstand internal ...