

Title (en)  
THERMAL ENERGY STORAGE SYSTEM

Title (de)  
WÄRMEENERGIESPEICHERSYSTEM

Title (fr)  
SYSTÈME DE STOCKAGE D'ÉNERGIE THERMIQUE

Publication  
**EP 2043930 A1 20090408 (EN)**

Application  
**EP 07784645 A 20070713**

Priority  
• AU 2007000980 W 20070713  
• AU 2006903801 A 20060714  
• AU 2006905367 A 20060928

Abstract (en)  
[origin: WO2008006174A1] A thermal energy storage system is disclosed in which at least one vertically extending cavity (28) is formed within ground that is constituted by geologically stable consolidated rock (29), and at least one cylindrical steel vessel (30) having a diametral dimension smaller than its longitudinal dimension is positioned within the cavity and surrounded peripherally by a containment material. Also, conduits (21) and (26) are provided for directing pressurised water (in vapour and/or liquid phase) into the vessel (30) and for conveying steam from an upper region of the vessel. The vessel has a peripheral wall that functions as a liner for the containment material and, in operation of the system, internal pressure-induced forces are transferred from the vessel to the containment material by way of the peripheral wall. The containment material in one embodiment of the invention comprises the surrounding rock (29). In a further embodiment the containment material comprises a filler material 36 and in this case the internal pressure induced forces are transferred from the vessel to the surrounding rock by way of the filler material.

IPC 8 full level  
**B65D 88/76** (2006.01); **B65G 5/00** (2006.01); **E21F 17/16** (2006.01); **F28D 20/00** (2006.01)

CPC (source: EP US)  
**F28D 20/0043** (2013.01 - EP US); **Y02E 60/14** (2013.01 - EP US)

Citation (search report)  
See references of WO 2008006174A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA HR MK RS

DOCDB simple family (publication)  
**WO 2008006174 A1 20080117**; AU 2007272319 A1 20080117; EP 2043930 A1 20090408; US 2009294096 A1 20091203

DOCDB simple family (application)  
**AU 2007000980 W 20070713**; AU 2007272319 A 20070713; EP 07784645 A 20070713; US 37355307 A 20070713