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(54) Title: THERMAL ENERGY STORAGE TANK

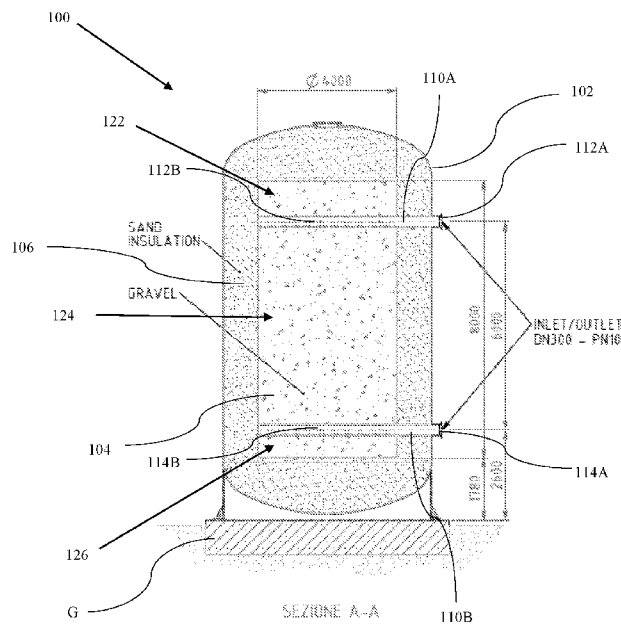


FIG. 4

(57) Abstract: A thermal energy storage tank may include an outer shell, a main chamber positioned within the outer shell, and a secondary chamber surrounding the main chamber and positioned within the outer shell. The main chamber may also be filled with a heat storing material and the secondary chamber may be filled with an insulating material. Additionally, the thermal energy storage tank may include one or more pipes extending through the outer shell and into the main chamber and the one or more pipes may receive a flow of heated air to heat the heat storing material.



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A. CLASSIFICATION OF SUBJECT MATTER
 IPC - INV. F01K 3/00, F22B 1/00, F22B 1/02, F24H 9/06, F24S 60/00, F28D 20/00 (2024.01)
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

See Search History document

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2015/0159959 A1 (Petrovic) 11 June 2015 (11.06.2015), entire document, especially para [0017], [0040], [0057]-[0059], [0061], [0064]-[0065], [0085]-[0086], fig. 1-2, 6	1-9, 11-15, 18-20
Y		10
X	US 2021/0207527 A1 (The University Court of Energy Storage System) 08 June 2021 (08.06.2021), entire document, especially para [0103], [0105], [0108], [0110], fig. 1	1, 16-17
Y	KR 2000-0054178 A (Choi) 05 September 2000 (05.09.2000), entire document, especially the figure on the second to last page	10
A	US 2016/0222881 A1 (IFP Energies nouvelles) 04 August 2016 (04.08.2016), entire document	1-20
A	US 2021/0190438 A1 (Heliac APS) 24 June 2021 (24.06.2021), entire document	1-20
A	US 2012/0285442 A1 (Hung) 15 November 2012 (15.11.2012), entire document	1-20
A	US 2015/0113806 A1 (Commissariat à l'énergie atomique et aux énergies alternatives) 30 April 2015 (30.04.2015), entire document	1-20
A	WO 2021/168570 A1 (Rouindaj) 02 September 2021 (02.09.2021), entire document	1-20
A	DE 10 2012 007 432 A1 (Barth) 17 October 2013 (17.10.2013), entire document	1-20

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"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

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