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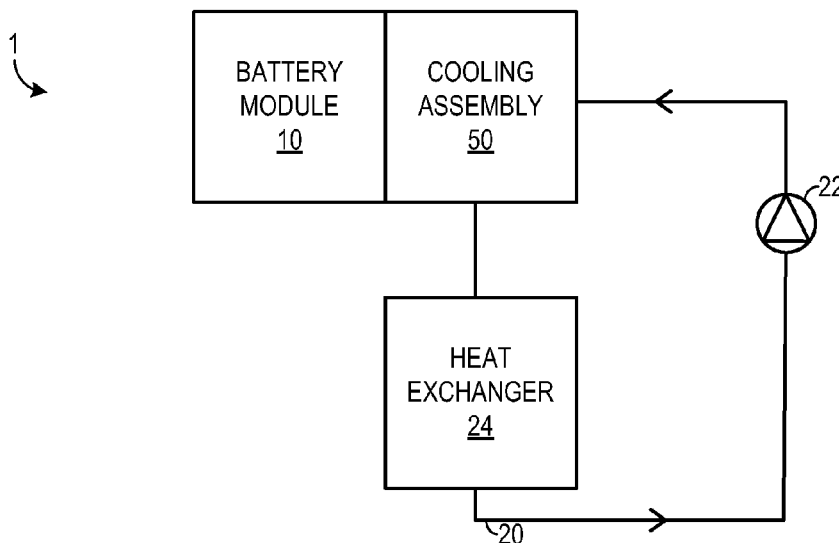
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(54) Title: COOLING ASSEMBLY AND METHOD OF CONTROL

FIG. 1



(57) Abstract: A cooling assembly for a battery module is disclosed. In one example, the cooling assembly includes a cold plate including a plurality of protrusions defining a plurality of coolant channels, a first flow directing header coupled to the cold plate and arranged perpendicular to and spaced away from an end of at least one protrusion, and a second flow directing header coupled to the cold plate and arranged perpendicular to and spaced away from an end of at least one protrusion.



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## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/US2012/032276****A. CLASSIFICATION OF SUBJECT MATTER****H01M 10/50(2006.01)i, F25D 17/00(2006.01)i**

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)

H01M 10/50; B05D 5/12; H01M 4/00; H01M 8/18; H01M 8/04; H01M 2/08; H05K 7/20; H01M 8/02; F17C 11/00; F25B 17/12

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) &amp; Keywords: cold plate,header,protrusion,coolant channel,inlet,outlet

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6230791 B1 (VAN DINE, PIETER et al.) 15 May 2001 See the whole document.	1-20
A	US 2004-0197633 A1 (YAMAMOTO, MASAO et al.) 07 October 2004 See the whole document.	1-20
A	JP 2006-266350 A (JAPAN STEEL WORKS LTD. et al.) 05 October 2006 See the whole document.	1-20
A	US 7261960 B2 (STANDKE, MICHAEL et al.) 28 August 2007 See the whole document.	1-20
A	US 2010-0028742 A1 (JEON, YOO TAEK et al.) 04 February 2010 See the whole document.	1-20

 Further documents are listed in the continuation of Box C. See patent family annex.

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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Date of the actual completion of the international search

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

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