

Title (en)  
HEAT CAPTURE, TRANSFER AND RELEASE FOR INDUSTRIAL APPLICATIONS

Title (de)  
ERFASSUNG, ÜBERTRAGUNG UND FREISETZUNG VON WÄRME FÜR INDUSTRIELLE ANWENDUNGEN

Title (fr)  
CAPTURE, TRANSFERT ET LIBÉRATION DE CHALEUR POUR APPLICATIONS INDUSTRIELLES

Publication  
**EP 3186575 A4 20180808 (EN)**

Application  
**EP 15835106 A 20150825**

Priority  
• US 201462041556 P 20140825  
• US 2015046737 W 20150825

Abstract (en)  
[origin: WO2016033071A1] Embodiments of the invention provide systems and methods for heat transfer at temperatures in the range of -40 °C to 1,300 °C over long distances with minimal heat losses. The systems consist of advanced heat pipes configured such that they fit inside drilling holes or in horizontal distance over industrial plants, and effectively transfer heat requiring minimal water, CO<sub>2</sub>, or steam injection, and that operate without user intervention for many years.

IPC 8 full level  
**F28D 15/02** (2006.01); **F28D 15/04** (2006.01); **F28D 15/06** (2006.01); **F28D 20/00** (2006.01); **F28D 21/00** (2006.01)

CPC (source: EP KR US)  
**F24T 10/13** (2018.05 - EP KR US); **F28D 15/0266** (2013.01 - EP KR US); **F28D 15/0275** (2013.01 - EP KR US);  
**F28D 15/043** (2013.01 - EP KR US); **F28D 15/046** (2013.01 - EP US); **F28D 15/06** (2013.01 - EP KR US); **F28D 20/0052** (2013.01 - EP KR US);  
**F28D 21/001** (2013.01 - EP KR US); **Y02E 10/10** (2013.01 - EP KR US); **Y02E 60/14** (2013.01 - KR US); **Y02P 80/10** (2015.11 - EP US)

Citation (search report)  
• [X] US 2009323886 A1 20091231 - EL-GENK MOHAMED S [US], et al  
• [X] US 4047093 A 19770906 - LEVOY LARRY  
• [I] US 2012267066 A1 20121025 - KIM HUN CHOL [KR]  
• [I] EP 1321735 A2 20030625 - TS HEATRONICS CO LTD [JP]  
• [A] CN 202204358 U 20120425 - SUZHOU JULI MOTOR CO LTD  
• [A] US 2012227935 A1 20120913 - HUANG YU-PO [CN]  
• See also references of WO 2016033071A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2016033071 A1 20160303**; AU 2015306751 A1 20170413; AU 2015306751 A2 20170601; CA 2959058 A1 20160303;  
CA 2959058 C 20230523; CN 106605118 A 20170426; EP 3186575 A1 20170705; EP 3186575 A4 20180808; IL 250565 A0 20170330;  
JP 2017525926 A 20170907; KR 20170047331 A 20170504; MX 2017002430 A 20170515; SG 11201701346V A 20170330;  
TW 201629422 A 20160816; US 2018224215 A1 20180809

DOCDB simple family (application)  
**US 2015046737 W 20150825**; AU 2015306751 A 20150825; CA 2959058 A 20150825; CN 201580046398 A 20150825;  
EP 15835106 A 20150825; IL 25056517 A 20170212; JP 2017510872 A 20150825; KR 20177008231 A 20150825; MX 2017002430 A 20150825;  
SG 11201701346V A 20150825; TW 104127744 A 20150825; US 201515506395 A 20150825