

Title (en)  
TRANSPARENT INSULATION PANEL RETROFIT FOR A SOLAR COLLECTOR

Title (de)  
UMRÜSTUNG EINER TRANSPARENTE DÄMMPLATTE FÜR EINEN SOLARKOLLEKTOR

Title (fr)  
PANNEAU D'ISOLATION TRANSPARENT ADAPTÉ À UN CAPTEUR SOLAIRE

Publication  
**EP 2601683 A4 20150513 (EN)**

Application  
**EP 11814190 A 20110802**

Priority  
• US 36976710 P 20100802  
• IB 2011053435 W 20110802

Abstract (en)  
[origin: WO2012017387A1] An apparatus and method for retrofitting existing solar collection panels with transparent thermal insulation facilitates upgrading existing conventional solar thermal panels with thermal insulation for the surface of the collection panel, with minimal effect on light transmission to the absorber. Use of a transparent thermal insulation panel improves the performance of an existing solar thermal panel, including, but not limited to increasing the output water temperature, operation at a lower level of solar radiation exposure, and reducing the minimum ambient operating temperature.

IPC 8 full level  
**H01L 31/042** (2014.01); **F24J 2/46** (2006.01); **F24J 2/50** (2006.01); **F24J 2/51** (2006.01)

CPC (source: EP US)  
**F24S 70/30** (2018.04 - EP); **F24S 80/56** (2018.04 - EP US); **F24S 80/65** (2018.04 - EP US); **F24S 2025/6001** (2018.04 - EP); **F24S 2025/6006** (2018.04 - EP); **F24S 2025/601** (2018.04 - EP); **Y02E 10/40** (2013.01 - EP)

Citation (search report)  
• [XYI] WO 2010082181 A1 20100722 - TIGI LTD [IL], et al  
• [X] GB 1584764 A 19810218 - BFG GLASSGROUP  
• [XI] US 6758211 B1 20040706 - SCHMIDT CHRISTOPH [DE]  
• [Y] EP 2017551 A2 20090121 - MACGREGOR ARCHIBALD W K [GB]  
• [X] US 4949704 A 19900821 - PFLUGER ANTONIO [DE]  
• [X] EP 0079976 A1 19830601 - YAZAKI CORP [JP]  
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• [A] US 2009065046 A1 20090312 - DENAULT ROGER [US]  
• See references of WO 2012017387A1

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 2012017387 A1 20120209**; AU 2011287268 A1 20120802; EP 2601683 A1 20130612; EP 2601683 A4 20150513

DOCDB simple family (application)  
**IB 2011053435 W 20110802**; AU 2011287268 A 20110802; EP 11814190 A 20110802