

Title (en)

MODULAR THERMAL WATER SOLAR PANEL SYSTEM

Title (de)

MODULARES WARMWASSER-SONNENKOLLEKTORSYSTEM

Title (fr)

SYSTÈME DE PANNEAU SOLAIRE MODULAIRE POUR CHAUFFE-EAU

Publication

**EP 2464917 A4 20150311 (EN)**

Application

**EP 10829584 A 20100923**

Priority

- US 24605409 P 20090925
- IB 2010002590 W 20100923

Abstract (en)

[origin: US2011073105A1] A modular thermal solar panel water heating system with a plurality of solar heating modules, each including a inlet manifolds and outlet manifolds and a thin tube array disposed between and in fluid communication with the inlet and outlet manifolds. Mounting and clamping apparatus attach the solar heating modules to a surface and providing secure clamping pressures on clamped elements even as clamped elements expand and contract. Fittings provide a watertight coupling between adjoining modules and bring each module into fluid communication with at least one adjoining module. In a panel array, one module includes a water inlet for connection to a source of water under pressure and another module includes a water outlet. A set of plugs are disposed on the manifolds in a configuration that ensures that water introduced into the water inlet flows across at least one thin tube array before exiting the water outlet.

IPC 8 full level

**F16B 1/00** (2006.01); **F16B 7/00** (2006.01); **F16L 3/01** (2006.01); **F16M 13/00** (2006.01); **F24J 2/04** (2006.01); **F24J 2/52** (2006.01); **F24S 10/70** (2018.01); **F24S 20/30** (2018.01); **F28D 1/053** (2006.01); **F28D 7/12** (2006.01); **F28D 7/16** (2006.01); **F24J 2/00** (2014.01); **F24J 2/46** (2006.01)

CPC (source: EP US)

**F24S 10/72** (2018.04 - EP US); **F24S 80/30** (2018.04 - EP US); **F24S 2020/10** (2018.04 - EP US); **Y02B 10/20** (2013.01 - EP US); **Y02E 10/44** (2013.01 - EP US)

Citation (search report)

- [XYI] EP 2048453 A1 20090415 - AUTUMN SOLAR INSTALLATIONS PTY [AU]
- [Y] US 2004216410 A1 20041104 - SHATZKY SOI [IL]
- [Y] GB 2058192 A 19810408 - ITW LTD
- See references of WO 2011058401A1

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 SE SI SK SM TR

DOCDB simple family (publication)

**US 2011073105 A1 20110331**; AU 2010317684 A1 20120412; CN 102597650 A 20120718; CN 102597650 B 20140716; EP 2464917 A1 20120620; EP 2464917 A4 20150311; WO 2011058401 A1 20110519

DOCDB simple family (application)

**US 88934010 A 20100923**; AU 2010317684 A 20100923; CN 201080042609 A 20100923; EP 10829584 A 20100923; IB 2010002590 W 20100923