

Title (en)

SOLAR BLACKBODY WAVEGUIDE FOR HIGH PRESSURE AND HIGH TEMPERATURE APPLICATIONS

Title (de)

SOLAR-SCHWARZKÖRPER-WELLENLEITER FÜR HOCHDRUCK- UND HOCHTEMPERATURANWENDUNGEN

Title (fr)

GUIDE D'ONDES A CORPS NOIR SOLAIRE POUR DES APPLICATIONS SOUS HAUTE PRESSION ET A HAUTE TEMPERATURE

Publication

EP 1949007 A2 20080730 (EN)

Application

EP 06837095 A 20061107

Priority

- US 2006043390 W 20061107
- US 27316605 A 20051114

Abstract (en)

[origin: WO2007058834A2] A solar blackbody waveguide (10) that captures and uses sunlight to heat a thermal heat transfer fluid. One or more systems of optical mirrors (18) provided on each tower (12) captures and concentrates the sunlight. Each system of optical mirrors (18) is movably mounted on its tower (12) to track the daily movement of the sun and to maintain the proper angle with the horizon throughout the year. Each system of optical mirrors (18) directs the light into an associated short light pipe (42) which delivers the light into a curved solar coil (44) contained within an enclosure (46). Energy from the light rays is absorbed by the solar coil (44) and transferred to thermal working fluid or heat transfer fluid (64) flowing between the solar coil (44) and the enclosure (46). The energy laden thermal heat transfer fluid (64) is gathered from a plurality of towers (12) for use with existing technologies, such as with a combined cycle gas turbine (22), boiler, or steam generator (102).

IPC 8 full level

F24J 2/46 (2006.01); **F24S 10/95** (2018.01)

CPC (source: EP US)

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