

Title (en)

METHOD FOR PRODUCING A CERMET-BASED SPECTRALLY SELECTIVE COATING AND MATERIAL THUS OBTAINED

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER SPEKTRAL SELEKTIVEN BESCHICHTUNG AUF CERMETBASIS UND DAMIT ERHALTENES MATERIAL

Title (fr)

PROCÉDÉ DE PRODUCTION D'UN REVÊTEMENT SPECTRALEMENT SÉLECTIF À BASE DE CERMET POUR LE TUBE DE RÉCEPTION D'UN CONCENTRATEUR SOLAIRE, ET MATÉRIAU AINSI OBTENU

Publication

EP 2245208 A2 20101103 (EN)

Application

EP 09715629 A 20090128

Priority

- IT 2009000021 W 20090128
- IT RM20080113 A 20080229

Abstract (en)

[origin: WO2009107157A2] A surface-coating material for receiver tubes of solar plants, in particular of the type with linear parabolic mirrors, constituted by a multilayer structure comprising a bottom metal layer (back reflector) highly reflective in the infrared and a top layer of anti-reflective material, provided between which is a layer of an innovative composite ceramic-metal material (CERMET) of the graded type, in the case in point with volumetric fraction of metal that decreases, passing from the metal reflector to the anti-reflective layer. In particular : i) the ceramic matrix of the CERMET is made up of aluminium oxide (Al₂O₃), whilst the metal particles dispersed in the ceramic matrix are constituted by tungsten (W); ii) the back reflector is tungsten in its crystalline form a; iii) the anti-reflective layer is aluminium oxide or else silicon oxide.

IPC 8 full level

C23C 14/06 (2006.01); **C23C 14/34** (2006.01); **F24J 2/48** (2006.01)

CPC (source: EP US)

C23C 14/0084 (2013.01 - EP); **C23C 14/0688** (2013.01 - EP US); **F24S 20/20** (2018.04 - EP); **F24S 70/225** (2018.04 - EP US); **F24S 70/30** (2018.04 - EP); **Y02E 10/40** (2013.01 - EP)

Citation (search report)

See references of WO 2009107157A2

Designated contracting state (EPC)

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 TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

WO 2009107157 A2 20090903; **WO 2009107157 A3 20100114**; EP 2245208 A2 20101103; IT RM20080113 A1 20090901

DOCDB simple family (application)

IT 2009000021 W 20090128; EP 09715629 A 20090128; IT RM20080113 A 20080229