Title (en)

SHEATHED GLOW PLUG

Title (de)

UMMANTELTER GLÜHSTIFT

Title (fr)

BOUGIE DE PRÉCHAUFFAGE GAINÉE

Publication

EP 2229557 A2 20100922 (EN)

Application

EP 08861631 A 20081217

Priority

- US 2008087071 W 20081217
- US 1412207 P 20071217
- US 6138708 P 20080613
- US 33568208 A 20081216

Abstract (en)

[origin: WO2009079530A2] A glow plug which includes an annular metal shell, thermally conductive tubular sheath, central electrode; resistance heating element, and electrically insulating, thermally conductive powder includes a glass seal in sealing engagement with the sheath and the electrode to form a sealed cavity within the sheath. The glass seal may include silicate, borate and borosilicate glasses, and may include one or more transition metal oxides, such as oxides of chromium, cobalt, nickel, iron and copper. The glass may also include a filler, including a ceramic oxide, such as one selected from a group consisting of quartz, eucryptites, leucites, cordierites, beta-spodumene, glass-ceramics, low- expansion glass(CTE<5ppm/°C), mullite, zircon, zirconia and alumina. The sealed cavity may house a protective inert gas. The resistance heating element may be formed from a metal selected from a group consisting of tungsten, molybdenum, or alloys containing tungsten, molybdenum, nickel, iron, tantalum, niobium, titanium, vanadium, osmium and chromium.

IPC 8 full level

F23Q 7/22 (2006.01); **F23Q 7/00** (2006.01)

CPC (source: EP US)

F23Q 7/001 (2013.01 - EP US)

Citation (search report)

See references of WO 2009079530A2

Cited by

CN104566450A

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 MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

WO 2009079530 A2 20090625; **WO 2009079530 A3 20090911**; CN 101896772 A 20101124; CN 101896772 B 20120425; EP 2229557 A2 20100922; JP 2011506910 A 20110303; KR 20100098702 A 20100908; US 2009184101 A1 20090723

DOCDB simple family (application)

US 2008087071 W 20081217; CN 200880121318 A 20081217; EP 08861631 A 20081217; JP 2010539719 A 20081217; KR 20107015756 A 20081217; US 33568208 A 20081216