

Title (en)

Configuration of a glow plug and a connector with integrated electronics and heat sink, for diesel engine

Title (de)

Konfiguration einer Glühkerze und einem Stecker mit integrierter Elektronik und Wärmesenke, für einen Dieselmotor

Title (fr)

Configuration d'un bougie à incandescence et d'un connecteur avec électronique intégrée et dissipateur de chaleur, pour un moteur Diesel

Publication

**EP 2202461 B1 20131106 (EN)**

Application

**EP 10156649 A 20051122**

Priority

- EP 05025454 A 20051122
- JP 2004340404 A 20041125

Abstract (en)

[origin: EP1669675A1] According to the present invention, a glow plug (100) for a diesel engine is provided which includes a heating element (22), a semiconductor chip (61) that includes therein a power transistor, and a heat sink (50). The heating element (22) is configured to generate heat when supplied with electric power, so as to heat the air-fuel mixture within a cylinder of the diesel engine. The power transistor in the semiconductor chip (61) is configured to be selectively turned on and off so as to intermittently supply electric power to the heating element. The heat sink (50) serves to dissipate heat generated by operation of the semiconductor chip (61) so as to prevent the semiconductor chip from being damaged due to the heat. With such a configuration, it becomes possible to integrate the semiconductor chip (61) into the glow plug (100) while providing the glow plug with a capability of effectively dissipating the heat generated by operation of the semiconductor chip.

IPC 8 full level

**F23Q 7/00** (2006.01); **F02P 17/12** (2006.01); **F02P 19/02** (2006.01); **F23Q 7/24** (2006.01); **H01L 23/36** (2006.01)

CPC (source: EP)

**F02P 17/12** (2013.01); **F02P 19/022** (2013.01); **F02P 19/027** (2013.01); **F23Q 7/001** (2013.01); **F02P 19/023** (2013.01); **F23Q 2007/002** (2013.01); **H01L 2924/0002** (2013.01)

Cited by

CN110398525A; DE102013201048A1; DE102013201048B4

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

**EP 1669675 A1 20060614**; **EP 1669675 B1 20110309**; DE 602005026766 D1 20110421; EP 2202461 A2 20100630; EP 2202461 A3 20100922; EP 2202461 B1 20131106; JP 2006153293 A 20060615; JP 4225273 B2 20090218

DOCDB simple family (application)

**EP 05025454 A 20051122**; DE 602005026766 T 20051122; EP 10156649 A 20051122; JP 2004340404 A 20041125