

Title (en)

Ceramic glow plug.

Title (de)

Keramische Glühkerze.

Title (fr)

Bougie à incandescence en céramique.

Publication

**EP 0648978 A3 19960724 (EN)**

Application

**EP 94307223 A 19941003**

Priority

- JP 26943193 A 19931004
- JP 26943293 A 19931004

Abstract (en)

[origin: EP0648978A2] This invention provides a ceramic glow plug of current self-control type with a stable strength and a high-temperature strength resistant to thermal shocks. In this ceramic glow plug, the ceramic pipe (2) is secured to the hollow body (1) having the electrode (10) and is formed with the conductive printed layer (8) on its outer surface. One end of the pipe (2) is sealed by the ceramic filler (4) to form the hollow portion (9) inside the pipe. In the hollow portion (9) sealed with N<sub>2</sub> gas, the tungsten wire (3) is installed, with one end (7) connected to the conductive printed layer (8) and the other end (16) to the electrode (10). The outer circumferential surface (13) of the pipe (2) is formed with the ceramic outer surface coating layer (5). When the tungsten wire (3) and the conductive printed layer (8) are supplied with electricity, the conductive printed layer (8) functions as the heater portion (12) and the tungsten wire (3) as the current control portion (6). <IMAGE>

IPC 1-7

**F23Q 7/00**

IPC 8 full level

**F23Q 7/00** (2006.01)

CPC (source: EP)

**F23Q 7/001** (2013.01)

Citation (search report)

- [A] WO 9118244 A1 19911128 - CATERPILLAR INC [US]
- [A] WO 9118245 A1 19911128 - CATERPILLAR INC [US]
- [A] GB 2092670 A 19820818 - BOSCH GMBH ROBERT
- [A] PATENT ABSTRACTS OF JAPAN vol. 7, no. 165 (M - 230) 20 July 1958 (1958-07-20)

Cited by

EP2088373A1; US6043459A; US6184497B1; EP2886960A1; DE10228076A1; EP0821200A1; US5880433A; DE10228077A1; US6084212A; DE102005024622A1; DE102005024622B4; DE19756988C1; US6121577A; WO2015097044A1; WO2014202265A1; US10993288B2; US11930564B2

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