

Title (en)

Fuel rail equipped with an axial heater device layout for engine cold start operation with ethanol

Title (de)

Mit axialem Erhitzervorrichtungslayout ausgestatteter Kraftstoffverteiler zur Motor-Kaltstartoperation mit Ethanol

Title (fr)

Rampe de carburant avec dispositif de chauffage axial pour les opérations de démarrage à froid du moteur avec de l'éthanol

Publication

EP 2194261 A1 20100609 (EN)

Application

EP 09174659 A 20091030

Priority

BR PI0805484 A 20081202

Abstract (en)

The present invention relates to a primary fuel rail (10) of the return-less type equipped with a particular axial heater device layout to increase the heat flux homogeneity in the fuel rail for an Ethanol Cold Start (ECS) system. The fuel rail (10) has one or more heating elements (12a, 12b) inserted therein in such a way that the heating part (100) of each element is oriented along or parallel to the main symmetry axis of the principal cavity of the said fuel rail (10) and each heating element is composed of two parts, an inactive support part (101) and an active heating part (100) having lengths (La, X), which can be individually tuned to obtain a maximum homogeneity of the heat flux along the rail towards the fuel injectors (11a-11d).

IPC 8 full level

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CPC (source: EP)

F02M 53/02 (2013.01); **F02M 55/025** (2013.01); **F02M 63/0225** (2013.01); **F02M 2200/60** (2013.01)

Citation (applicant)

- JP H08338339 A 19961224 - ISUZU MOTORS LTD
- DE 10341708 A1 20050428 - MAN B & W DIESEL AG [DE]
- EP 2071159 B1 20101006 - MAGNETI MARELLI SIST S AUTOMOT [BR]

Citation (search report)

- [X] JP H08338339 A 19961224 - ISUZU MOTORS LTD
- [X] DE 10341708 A1 20050428 - MAN B & W DIESEL AG [DE]
- [A] WO 2007030906 A2 20070322 - FIAT AUTOMOVEIS SA MECANICA [BR], et al
- [A] WO 2006130938 A1 20061214 - BOSCH DO BRASIL [BR], et al
- [AP] EP 2071159 A1 20090617 - MAGNETI MARELLI SIST S AUTOMOT [BR]

Cited by

DE102014209728A1; ITBO20120423A1; ITTO20090853A1; JP2015059538A; GB2495549A; EP2487359A1; US8069845B2; US9638152B2; WO2011055295A1

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