

Title (en)
Oil preheating device.

Title (de)
Heizeinrichtung zur Vorwärmung von Heizöl.

Title (fr)
Dispositif de préchauffage pour mazout.

Publication
EP 0009136 A2 19800402 (DE)

Application
EP 79103136 A 19790824

Priority
DE 2840242 A 19780915

Abstract (en)
[origin: US4371778A] A heating device for preheating heating oil flowing through a pipe has a heat conduction body to which a plate-shaped ceramic PTC resistance heating element is connected in heat exchange-relationship. The heating element has a thickness in the range of 0.5 to 2 millimeters, a Curie temperature between 120 DEG and 220 DEG C. and a specific resistance of 430 to 5000 ohm-cm rated at a supply voltage between 110 and 220 volts such that the maximum temperature achieved by the heating element over a range of heat transfer rates is relatively constant and is determined by the resistivity and the Curie temperature of the heating element rather than by the rate of heat transfer. If designed for energization at 220 volts, the heating element has the same thickness and Curie temperature as in the first example described above, but with a specific resistance of 1700 to 20,000 ohm-cm as measured at 220 volts.

Abstract (de)
Heizöl-Vorwärmung mit Kaltleiter-Heizung (1) für großen Belastungsbereich.

IPC 1-7
H05B 3/12; **F23K 5/00**

IPC 8 full level
F23D 11/44 (2006.01); **F23K 5/00** (2006.01); **F23K 5/20** (2006.01); **H05B 3/12** (2006.01); **H05B 3/14** (2006.01)

CPC (source: EP US)
F23K 5/20 (2013.01 - EP US); **H05B 3/141** (2013.01 - EP US)

Cited by
EP0021106A3; EP0018554A3; EP0057171B1

Designated contracting state (EPC)
AT CH FR GB IT NL SE

DOCDB simple family (publication)
EP 0009136 A2 19800402; **EP 0009136 A3 19800416**; **EP 0009136 B1 19830420**; AT E3132 T1 19830515; DE 2840242 A1 19800327; DE 2840242 C2 19840823; DK 385279 A 19800316; JP S5541400 A 19800324; US 4371778 A 19830201

DOCDB simple family (application)
EP 79103136 A 19790824; AT 79103136 T 19790824; DE 2840242 A 19780915; DK 385279 A 19790914; JP 11920379 A 19790917; US 7228579 A 19790904