

Title (en)

Pump having protection means against freezing

Title (de)

Pumpe mit Frostschutzeinrichtung

Title (fr)

Pompe ayant des moyens de protection contre la gelée

Publication

EP 1672216 B1 20070502 (DE)

Application

EP 05024983 A 20051116

Priority

DE 102004060418 A 20041214

Abstract (en)

[origin: EP1672216A1] The pump has an anti-frost device (5) which has a control system (6) with a temperature sensor (7). The control system switches on the pumping unit when temperature of the medium to be conveyed falls below the first pre-set temperature. The pumping unit is switched-off by the control system when the temperature of the medium exceeds second pre-set temperature which is higher than first pre-set temperature.

IPC 8 full level

F04B 49/02 (2006.01); **F04C 19/00** (2006.01); **F04D 15/00** (2006.01)

CPC (source: EP)

F04B 49/02 (2013.01); **F04B 53/08** (2013.01); **F04C 14/28** (2013.01); **F04D 15/0066** (2013.01); **F04D 15/0077** (2013.01); **F04C 2270/19** (2013.01); **F04C 2270/78** (2013.01)

Cited by

CN112343808A; US2011002791A1; EP2404053A4; WO2013124038A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1672216 A1 20060621; **EP 1672216 B1 20070502**; AT E361428 T1 20070515; DE 102004060418 A1 20060706; DE 502005000659 D1 20070614; ES 2284119 T3 20071101

DOCDB simple family (application)

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