

Title (en)
Vacuum pumping with energy limitation

Title (de)
Vakuumpump mit einer Energiebeschränkung

Title (fr)
Pompage à vide avec limitation d'énergie

Publication
EP 1710440 A3 20080206 (FR)

Application
EP 06300288 A 20060327

Priority
FR 0503352 A 20050405

Abstract (en)
[origin: EP1710440A2] The device has a motor (1) driving a ROOTS type mechanical dry pump (2) with four-stages (5-8) comprising suction sides (5c-8c) and outlets (5d-8d). Inter-staged pipelines (9-11) connect the outlets (5d-7d) to the sides (6c-8c), respectively. Bypass lines (12, 13) are arranged between the side (5c) and the pipeline (9) and between the pipelines (9, 10), respectively. Bypass lines (14, 15) are arranged between the pipelines (10, 11) and between the pipeline (11) and the outlet (8d), respectively. Valves (16-19) are inserted in the pipeline (9, 11) and in the bypass lines (13, 15). An independent claim is also included for a method for vacuum pumping by a multi-staged mechanical dry pump.

IPC 8 full level
F04C 23/00 (2006.01); **F04C 18/12** (2006.01); **F04C 28/02** (2006.01); **F04C 28/08** (2006.01); **F04C 28/10** (2006.01)

CPC (source: EP US)
F04C 23/001 (2013.01 - EP US); **F04C 25/02** (2013.01 - EP US); **F04C 28/02** (2013.01 - EP US); **F04C 28/08** (2013.01 - EP US); **F04C 28/10** (2013.01 - EP US); **F04C 18/126** (2013.01 - EP US); **F04C 2220/30** (2013.01 - EP US); **F04C 2270/05** (2013.01 - EP US); **F04C 2270/07** (2013.01 - EP US); **F04C 2270/58** (2013.01 - EP US)

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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

Designated extension state (EPC)
AL BA HR MK YU

DOCDB simple family (publication)
EP 1710440 A2 20061011; EP 1710440 A3 20080206; CN 100559028 C 20091111; CN 1847660 A 20061018; FR 2883934 A1 20061006; FR 2883934 B1 20100820; JP 2006291952 A 20061026; US 2006222506 A1 20061005

DOCDB simple family (application)
EP 06300288 A 20060327; CN 200610072638 A 20060405; FR 0503352 A 20050405; JP 2006101399 A 20060403; US 39657406 A 20060404