

Title (en)  
Vacuum pumping with energy limitation

Title (de)  
Vakuumpumpe mit Beschränkung des Energiebedarfs

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

Publication  
**EP 1710440 A2 20061011 (FR)**

Application  
**EP 06300288 A 20060327**

Priority  
FR 0503352 A 20050405

Abstract (en)  
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.

Abstract (fr)  
Un dispositif de pompage à vide selon l'invention comprend un moteur (1) entraînant une pompe mécanique sèche (2) multi-étagée dans laquelle les étages (5, 6, 7, 8) sont connectés successivement en parallèle puis en série, selon plusieurs configurations successives que l'on choisit chacune pour optimiser le débit de pompage dans la plage de pression en cours. Cela permet de descendre rapidement la pression dans une enceinte (100), tout en réduisant d'environ 40 % le volume de la pompe et l'énergie consommée par rapport à une pompe traditionnelle de débit suffisant pour atteindre la même rapidité de pompage.

IPC 8 full level  
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