

Title (en)

Multi-stage vacuum pumping system.

Title (de)

Mehrstufiges Vakuum-Pumpsystem.

Title (fr)

Système de pompe à vide multi-étage.

Publication

EP 0541989 B1 19950628 (DE)

Application

EP 92117784 A 19921017

Priority

DE 4136950 A 19911111

Abstract (en)

[origin: EP0541989A1] A multi-stage vacuum pumping system comprising intermediate exhaustion (6) between the individual pumping stages is fitted with one or more additional valves (8) between the intermediate exhaustion connection (6) and the pump stage (1) facing the high-vacuum side in each case. In order to maintain the vapour compatibility of the pump stage (1) facing the high-vacuum side, the pump stage is connected, in parallel to the additional valve (8), to the next pump stage (2) via a bypass line (9).

IPC 1-7

F04B 37/14

IPC 8 full level

F04C 23/00 (2006.01); **F04B 37/14** (2006.01); **F04C 25/02** (2006.01)

CPC (source: EP)

F04B 37/14 (2013.01)

Cited by

DE19962445A1; DE4442174A1; EP0723080A1; US5595477A; DE19831123A1; EP0972938A3; EP0752531A1; DE19524609A1; US6004109A; US11933284B2; WO2020109790A1; EP1101943A2; EP0730093A1

Designated contracting state (EPC)

BE CH DE FR GB IT LI NL

DOCDB simple family (publication)

EP 0541989 A1 19930519; EP 0541989 B1 19950628; DE 4136950 A1 19930513; DE 59202713 D1 19950803; JP H05248383 A 19930924

DOCDB simple family (application)

EP 92117784 A 19921017; DE 4136950 A 19911111; DE 59202713 T 19921017; JP 30099992 A 19921111