

Title (en)

METHOD OF PUMPING IN A SYSTEM OF VACUUM PUMPS AND SYSTEM OF VACUUM PUMPS

Title (de)

VERFAHREN ZUM PUMPEN IN EINEM SYSTEM AUS VAKUUMPUMPEN UND SYSTEM AUS VAKUUMPUMPEN

Title (fr)

MÉTHODE DE POMPAGE DANS UN SYSTÈME DE POMPES À VIDE ET SYSTÈME DE POMPES À VIDE

Publication

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Application

EP 14738765 A 20140627

Priority

EP 2014063725 W 20140627

Abstract (en)

[origin: WO2015197138A1] Method of pumping and pumping system (SP, SPP) comprising: a lubricated-vanes main vacuum pump (3) with a gas inlet orifice (2) connected to a vacuum chamber (1) and a gas outlet orifice (4) opening into a pipe (5) before opening into the gas outlet (8) of the pumping system (SP, SPP), a non-return valve (6) positioned in the pipe (5) between the gas outlet orifice (4) and the gas outlet (8), and a lubricated-vanes auxiliary vacuum pump (7) connected in parallel with the non-return valve (6). The lubricated-vanes main vacuum pump (3) is set into operation in order to pump the gasses contained in the vacuum chamber (1) through the gas outlet orifice (4); simultaneously, a lubricated-vanes auxiliary vacuum pump (7) is set in operation and continues to be in operation for all of the time that the lubricated-vanes main vacuum pump (3) is pumping the gasses contained in the vacuum chamber (1) and/or for all of the time that the lubricated-vanes main vacuum pump (3) is maintaining a defined pressure in the vacuum chamber (1).

IPC 8 full level

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Citation (examination)

- US 2005000436 A1 20050106 - MULLER PETER [DE], et al
- EP 1589227 A1 20051026 - CIT ALCATEL [FR]

Citation (opposition)

Opponent : Edwards Limited

- JP S62233492 A 19871013 - SHIMADZU CORP
- JP 2003139055 A 20030514 - ULVAC CORP
- JP 2003129957 A 20030508 - ULVAC CORP

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ES 2774438 T3 20200721; JP 2017523339 A 20170817; JP 6608394 B2 20191120; KR 102223057 B1 20210305; KR 20170028381 A 20170313;
PL 3161318 T3 20200810; PT 3161318 T 20200306; RU 2017102492 A 20180727; RU 2017102492 A3 20180727; RU 2666720 C2 20180911;
TW 201608135 A 20160301; TW 202043623 A 20201201; TW I710702 B 20201121; TW I734588 B 20210721; US 10760573 B2 20200901;
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PT 14738765 T 20140627; RU 2017102492 A 20140627; TW 104120571 A 20150625; TW 109127956 A 20150625;
US 201415321839 A 20140627; US 202016868460 A 20200506