

Title (en)
VACUUM EVACUATION DEVICE

Title (de)
VORRICHTUNG FÜR VAKUUMENTLEERUNG

Title (fr)
DISPOSITIF D'ÉVACUATION DE VIDE

Publication
EP 2330299 A4 20160615 (EN)

Application
EP 09812899 A 20090910

Priority
• JP 2009004496 W 20090910
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Abstract (en)
[origin: EP2330299A1] A vacuum evacuation device including: a main pump; an auxiliary pump connected in series to the main pump; and an inter-pump piping for interconnecting an outlet of the main pump and an inlet of the auxiliary pump, wherein the main pump includes a mechanical booster pump; a ratio of the maximum power of a motor for the main pump to the maximum pumping rate of the main pump is no less than 5 W/(m³/h); the inter-pump piping includes a branch pipe branched from the middle of the inter-pump piping; and a check valve for releasing gas in the inter-pump piping and preventing a back flow of the gas is provided in the middle of the branch pipe.

IPC 8 full level
F04B 37/14 (2006.01); **F04B 41/06** (2006.01); **F04C 23/00** (2006.01); **F04C 25/02** (2006.01)

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F04B 37/10 (2013.01 - KR); **F04B 37/14** (2013.01 - EP US); **F04B 37/16** (2013.01 - KR); **F04B 39/10** (2013.01 - KR);
F04B 41/06 (2013.01 - EP US)

Citation (search report)
• [Y] US 2004173312 A1 20040909 - SHIBAYAMA KOUJI [JP], et al
• [Y] JP 2007231935 A 20070913 - EBARA DENSAN LTD, et al
• [A] US 3642384 A 19720215 - HUSE HENRY
• [A] EP 1906022 A1 20080402 - ANEST IWATA CORP [JP]
• [A] WO 2006082366 A1 20060810 - BOC GROUP PLC [GB], et al
• See references of WO 2010029750A1

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Designated contracting state (EPC)
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KR 101193479 B1 20121022; KR 20110040980 A 20110420; TW 201018790 A 20100516; TW I467092 B 20150101;
US 2011164992 A1 20110707; WO 2010029750 A1 20100318

DOCDB simple family (application)
EP 09812899 A 20090910; CN 200980132175 A 20090910; JP 2009004496 W 20090910; JP 2010528647 A 20090910;
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