

Title (en)
VACUUM PUMP PROVIDED WITH A GAS BALLAST ARRANGEMENT

Title (de)
VAKUUMPUMPE MIT EINER GASBALLASTANORDNUNG

Title (fr)
POMPE À VIDE DOTÉ D'UN AGENCEMENT DE BALLAST DE GAZ

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Application
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Abstract (en)
The present invention relates to a vacuum pump (1) provided with a gas ballast arrangement. Such gas ballast arrangement includes a gas ballast supply duct (29) opening into the pumping chamber (7) of the vacuum pump, which gas ballast supply duct is open during the compression phase of the vacuum pump working cycle and is closed at least during the exhaust phase of the vacuum pumping working cycle. Thanks to this gas ballast arrangement, condensation of liquids in the pumping chamber can be effectively prevented while avoiding, at the same time, increase in power consumption and in noise generated by the vacuum pump. In a preferred embodiment, the gas ballast supply duct (29) is connected to the exhaust duct (23) of the vacuum pump by a connecting pipe (35) and the gas ballast arrangement includes a valve assembly (37, 39) arranged in said connecting pipe, so that opening / closing of the gas ballast supply pipe can be controlled by the pressure in said exhaust duct (23).

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Citation (applicant)
• EP 0159163 A2 19851023 - UNIV TORONTO [CA]
• US 2014363319 A1 20141211 - CARBONERI ELISABETTA [US], et al

Citation (search report)
• [XAI] GB 847776 A 19600914 - HERAEUS GMBH W C
• [A] US 4268230 A 19810519 - BASSAN BENJAMIN
• [A] US 2779533 A 19570129 - KLAUS ZIOCK
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