

Title (en)

A PUMP AND A METHOD OF PUMPING A GAS

Title (de)

PUMPE UND VERFAHREN ZUM PUMPEN EINES GASES

Title (fr)

POMPE ET PROCÉDÉ DE POMPAGE D'UN GAZ

Publication

EP 3924604 A1 20211222 (EN)

Application

EP 20707777 A 20200213

Priority

- GB 201902106 A 20190215
- GB 2020050338 W 20200213

Abstract (en)

[origin: GB2581382A] Disclosed is a pump comprising a housing element 20 and a further element 10, where one of the elements has a helix extending towards the other of the elements which has at least one liquid opening, the two elements and the helix form a path from a gas inlet to a gas outlet, with the further element mounted concentrically within the housing element such that the two can rotate relatively to each other, the helix narrowing as it extends from the element it is associated with and the at least one liquid opening configured to create a liquid blade when liquid is expelled such that it drives gas from the inlet to the outlet when the elements rotate. The pump may be a vacuum pump or a wet scrubber for an abatement system. Also included is a method of pumping a gas utilising a liquid blade and a helical element.

IPC 8 full level

F01C 1/22 (2006.01); **F04C 18/22** (2006.01); **F04D 17/18** (2006.01)

CPC (source: EP GB KR US)

F04C 5/00 (2013.01 - US); **F04C 18/0215** (2013.01 - GB KR); **F04C 18/22** (2013.01 - EP KR); **F04C 18/30** (2013.01 - EP); **F04C 19/00** (2013.01 - GB KR); **F04D 17/08** (2013.01 - US); **F04D 17/16** (2013.01 - US); **F04D 17/18** (2013.01 - EP); **F04D 29/444** (2013.01 - US); **F04C 5/00** (2013.01 - EP); **F04C 2240/20** (2013.01 - KR); **F04C 2240/30** (2013.01 - KR US); **F04C 2240/603** (2013.01 - EP KR)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

GB 201902106 D0 20190403; **GB 2581382 A 20200819**; **GB 2581382 B 20210818**; CN 113396271 A 20210914; CN 113396271 B 20231003; EP 3924604 A1 20211222; JP 2022520444 A 20220330; KR 20210126599 A 20211020; US 2022213892 A1 20220707; WO 2020165592 A1 20200820; WO 2020165592 A9 20210819

DOCDB simple family (application)

GB 201902106 A 20190215; CN 202080014275 A 20200213; EP 20707777 A 20200213; GB 2020050338 W 20200213; JP 2021547453 A 20200213; KR 20217025550 A 20200213; US 202017429845 A 20200213