

Title (en)
DOUBLE MEMBRANE FOR A DUST PUMP

Title (de)
DOPPELMEMBRAN FÜR EINE STAUBPUMPE

Title (fr)
DOUBLE MEMBRANE POUR POMPE À POUSSIÈRE

Publication
EP 3504438 A1 20190703 (DE)

Application
EP 17761039 A 20170822

Priority
• DE 102016216006 A 20160825
• EP 2017071066 W 20170822

Abstract (en)
[origin: WO2018036979A1] A double membrane is proposed for a diaphragm pump for fluidizing, covering and conveying dusty products, such as, for example, pulverized coal, with the aid of an inert gas at pressures of up to 7 MPa, said diaphragm pump having a porous, curved loosening element made from aluminium. According to the invention, the membrane tightness is monitored and ensured. For this purpose, the double membrane is designed with an integrated pressure sensor for monitoring leakages. A hermetically tight separation between the hydraulic chamber (11) and dust chamber (10) of the diaphragm pump can therefore be ensured and damage to the membrane can be promptly identified. Complicated repair and cleaning measures of the entire dust system or hydraulic system in the event of membrane damage are prevented and the tightness of the membrane is maintained during the incident. Particular refinements relate to the composition of the individual membranes and the interaction thereof.

IPC 8 full level
F04B 43/00 (2006.01); **F04B 43/06** (2006.01); **F04B 45/053** (2006.01)

CPC (source: EP US)
F04B 43/0054 (2013.01 - EP US); **F04B 43/0081** (2013.01 - EP US); **F04B 43/009** (2013.01 - EP US); **F04B 43/06** (2013.01 - EP US); **F04B 45/053** (2013.01 - EP US); **F04B 51/00** (2013.01 - US)

Citation (search report)
See references of WO 2018036979A1

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)
DE 102016216006 A1 20180301; CN 109790830 A 20190521; CN 109790830 B 20210720; EP 3504438 A1 20190703; EP 3504438 B1 20201021; US 10781807 B2 20200922; US 2019195216 A1 20190627; WO 2018036979 A1 20180301

DOCDB simple family (application)
DE 102016216006 A 20160825; CN 201780058702 A 20170822; EP 17761039 A 20170822; EP 2017071066 W 20170822; US 201716327588 A 20170822