

Title (en)
HIGH PRESSURE HYDROGEN GAS COMPRESSOR

Title (de)
HOCHDRUCK-WASSERSTOFFGASVERDICHTER

Title (fr)
COMPRESSEUR À GAZ PRODUISANT DE L'HYDROGÈNE À HAUTE PRESSION

Publication
EP 2683947 A1 20140115 (EN)

Application
EP 12704535 A 20120207

Priority
• GB 201102004 A 20110207
• GB 201117540 A 20111011
• GB 2012050270 W 20120207

Abstract (en)
[origin: GB2487790A] A gas compressor comprises an expandable liquid-filled bag 10 inside a pressure vessel 4. Filling and expanding the bag compresses a gas inside the pressure vessel, but outside the bag. The liquid is supplied from a tank 16 via a high pressure pump 21. Monitoring and control devices are provided for pressure, temperature, flow rate and fluid level. A nitrogen gas purging valve 8 may be provided. The liquid may be water or a hydraulic fluid. The gas may be hydrogen. The bag may be made of any flexible or composite material such as reinforced rubber or fibre reinforced plastic. As an alternative, the bag may be replaced with a mechanical piston inside the vessel, the piston being driven by liquid. As a further alternative, the liquid may be in direct contact with the gas, the rising column of liquid acting as a piston.

IPC 8 full level
F04F 5/18 (2006.01)

CPC (source: EP GB KR US)
F04B 9/103 (2013.01 - GB); **F04B 37/12** (2013.01 - GB); **F04B 39/0011** (2013.01 - EP US); **F04B 43/02** (2013.01 - KR);
F04B 45/00 (2013.01 - GB); **F04B 45/0536** (2013.01 - GB); **F04B 45/0736** (2013.01 - GB); **F04F 5/08** (2013.01 - EP US);
F04F 5/18 (2013.01 - EP KR US); **F04F 13/00** (2013.01 - US)

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

DOCDB simple family (publication)
GB 201102004 D0 20110323; **GB 2487790 A 20120808**; BR 112013020137 A2 20161101; CA 2826231 A1 20120816;
CN 103534490 A 20140122; EP 2683947 A1 20140115; GB 201117540 D0 20111123; GB 2487815 A 20120808; JP 2014507594 A 20140327;
KR 20140051826 A 20140502; US 2013315818 A1 20131128; WO 2012107756 A1 20120816

DOCDB simple family (application)
GB 201102004 A 20110207; BR 112013020137 A 20120207; CA 2826231 A 20120207; CN 201280007997 A 20120207;
EP 12704535 A 20120207; GB 201117540 A 20111011; GB 2012050270 W 20120207; JP 2013552279 A 20120207;
KR 20137022239 A 20120207; US 201213984153 A 20120207