

Title (en)

ROUNDEL STRUCTURE FOR FOUR-COMPRESSION-CHAMBER DIAPHRAGM PUMP WITH MULTIPLE EFFECTS

Title (de)

RONDELLSTRUKTUR FÜR MEMBRANPUMPE MIT VIER KOMPRESSIONSCHAMMERN MIT MEHRFACHWIRKUNG

Title (fr)

STRUCTURE DE RONDELLE DE POMPE À MEMBRANE À QUATRE CHAMBRES DE COMPRESSION À EFFETS MULTIPLES

Publication

**EP 3158194 A4 20180207 (EN)**

Application

**EP 15796299 A 20150505**

Priority

- US 201462000638 P 20140520
- US 2015029151 W 20150505

Abstract (en)

[origin: WO2015179121A1] A cylindrical or inverted frustoconical eccentric roundel structure for a four-compression-chamber diaphragm pump includes an annular positioning groove, a vertical or inverted frustoconical flank, and a sloped top ring extending between the annular positioning groove and the vertical or inverted frustoconical flank. By providing the sloped top ring, the oblique high frequency pulling and squeezing phenomenon that occurs in a conventional tubular eccentric roundel is completely eliminated.

IPC 8 full level

**F04B 43/02** (2006.01)

CPC (source: EP US)

**F04B 9/042** (2013.01 - EP US); **F04B 23/06** (2013.01 - US); **F04B 43/0054** (2013.01 - EP US); **F04B 43/04** (2013.01 - EP US); **F04B 43/14** (2013.01 - EP US); **F04B 53/14** (2013.01 - US); **F04B 53/16** (2013.01 - US)

Citation (search report)

- [YA] US 4486151 A 19841204 - KORHONEN-WESALA VEIKKO [SE]
- [YA] US 2007101860 A1 20070510 - HSU CHAO F [TW], et al
- [AD] US 6840745 B1 20050111 - MACAULEY STEPHEN [GB], et al
- [A] DE 102008035592 A1 20100204 - QUATTROFLOW FLUID SYSTEMS GMBH [DE]
- [A] DE 202006016594 U1 20070104 - QUATTROFLOW FLUID SYSTEMS GMBH [DE]
- See references of WO 2015179121A1

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)

**WO 2015179121 A1 20151126**; EP 3158194 A1 20170426; EP 3158194 A4 20180207; US 2015337817 A1 20151126

DOCDB simple family (application)

**US 2015029151 W 20150505**; EP 15796299 A 20150505; US 201514704193 A 20150505