

Title (en)
PUMPING SYSTEM SHAFT CONVERSION ADAPTER

Title (de)
PUMPENSYSTEM-WELLENWANDLUNGSADAPTER

Title (fr)
ADAPTATEUR DE CONVERSION D'ARBRE DE SYSTÈME DE POMPAGE

Publication
EP 3655659 A4 20210421 (EN)

Application
EP 18836077 A 20180720

Priority
• US 201762535224 P 20170720
• US 2018043079 W 20180720

Abstract (en)
[origin: WO2019018760A1] A pump for use in a motorized pumping system has a pump shaft with a lower ring groove and an upper ring groove. The pump also includes a lower adapter and an upper adapter. The lower adapter has a pair of lower ring halves configured to fit within the lower ring groove and the upper adapter has a pair of upper ring halves configured to fit within the upper ring groove. The pump further includes a plurality of stages that each have a stationary diffuser and a rotating impeller. The rotating impellers are connected to the shaft with a keyed connection that permits the impeller to axially travel along the shaft. Also disclosed is a method for converting a compression shaft to a floater shaft that includes the steps of placing an upper adapter into the upper ring groove, placing one or more impellers on the shaft, placing one or more standard spacers on the shaft and placing a lower adapter into the lower ring groove.

IPC 8 full level
F04D 13/10 (2006.01); **E21B 43/12** (2006.01); **F04D 1/06** (2006.01); **F04D 29/04** (2006.01); **F04D 29/041** (2006.01); **F04D 29/043** (2006.01); **F04D 29/044** (2006.01); **F04D 29/62** (2006.01)

CPC (source: EP US)
E21B 43/128 (2013.01 - EP US); **F04D 1/06** (2013.01 - US); **F04D 1/063** (2013.01 - EP US); **F04D 13/10** (2013.01 - EP US); **F04D 29/0413** (2013.01 - EP); **F04D 29/043** (2013.01 - EP); **F04D 29/047** (2013.01 - US); **F04D 29/054** (2013.01 - US); **F04D 29/628** (2013.01 - EP US); **F04D 29/042** (2013.01 - US); **F05D 2230/80** (2013.01 - EP)

Citation (search report)
• [X] US 2016201444 A1 20160714 - HARDEE JIM D [US], et al
• [I] US 3402670 A 19680924 - BOYD CLINTON A
• [I] CN 2866904 Y 20070207 - TIANJIN CITY OIL FIELD OIL EXT [CN]
• [A] FR 2951790 A1 20110429 - RENAULT SA [FR]
• See also references of WO 2019018760A1

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 2019018760 A1 20190124; AR 112711 A1 20191204; BR 112020001126 A2 20200721; CA 3070491 A1 20190124; CA 3070491 C 20210112; EP 3655659 A1 20200527; EP 3655659 A4 20210421; US 2019024665 A1 20190124

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US 2018043079 W 20180720; AR P180102045 A 20180720; BR 112020001126 A 20180720; CA 3070491 A 20180720; EP 18836077 A 20180720; US 201816040487 A 20180719