

Title (en)
HYDRAULIC SYSTEM WITH MODULAR INSERTS

Title (de)
HYDRAULISCHES SYSTEM MIT MODULAREN EINSÄTZEN

Title (fr)
SYSTÈME HYDRAULIQUE COMPRENANT DES ÉLÉMENTS INSÉRÉS MODULAIRES

Publication
EP 2898218 A4 20160727 (EN)

Application
EP 13838199 A 20130920

Priority
• US 201261703963 P 20120921
• US 2013061045 W 20130920

Abstract (en)
[origin: WO2014047516A1] A hydraulic turbocharger having replaceable, insertable components, including volute inserts, vaned diffuser inserts, nozzle inserts, diffuser inserts, nozzle liners and diffuser liners, that define the internal passageways of a hydraulic turbocharger. By making various components of the turbocharger removably insertable and replaceable, turbochargers can be manufactured in a cost-effective way to maximize efficiency, obtain improved performance and make it easier to operate these types of devices over a wide range of operating conditions. Moreover, the devices can be readily modified while in the field when operating conditions change.

IPC 8 full level
F04B 47/08 (2006.01); **F04D 13/04** (2006.01); **F04D 29/42** (2006.01); **F04D 29/62** (2006.01)

CPC (source: EP US)
C08F 8/12 (2013.01 - EP US); **C08F 8/32** (2013.01 - EP US); **C08F 8/34** (2013.01 - EP US); **C08F 8/44** (2013.01 - EP US);
F01D 15/08 (2013.01 - EP US); **F01D 25/24** (2013.01 - EP US); **F04D 13/043** (2013.01 - EP US); **F04D 29/426** (2013.01 - EP US);
F04D 29/4293 (2013.01 - EP US); **F04D 29/605** (2013.01 - US); **F04D 29/628** (2013.01 - EP US); **F05D 2230/51** (2013.01 - EP US);
Y10T 29/49826 (2015.01 - EP US)

Citation (search report)
• [XII] US 2006013707 A1 20060119 - OKLEJAS ROBERT A [US], et al
• [XI] US 2955540 A 19601011 - PAWLICKI STEFAN S
• [A] US 3656861 A 19720418 - ZAGAR IRVIN F
• See references of WO 2014047516A1

Cited by
US10731546B2

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 2014047516 A1 20140327; CA 2885533 A1 20140327; EP 2898218 A1 20150729; EP 2898218 A4 20160727; KR 20150058442 A 20150528;
MX 2015003629 A 20160108; US 2014093407 A1 20140403

DOCDB simple family (application)
US 2013061045 W 20130920; CA 2885533 A 20130920; EP 13838199 A 20130920; KR 20157010111 A 20130920; MX 2015003629 A 20130920;
US 201314033347 A 20130920