

Title (en)
Shaft seal

Title (de)
Wellenabdichtung

Title (fr)
Joint d'arbre

Publication
EP 2375000 B1 20190116 (DE)

Application
EP 11159510 A 20110324

Priority
DE 102010003796 A 20100409

Abstract (en)
[origin: EP2375000A2] The shaft seal (30) comprises an impeller side seal, which is provided between a bearing housing (31) and a shaft (20), and a bearing side seal, which is provided between the bearing housing and the shaft. An oil outlet chamber (53) is provided between the impeller side seal and the bearing side seal. The oil discharge chamber is limited by a third seal between the bearing housing and the shaft. A gas discharge chamber (55) is arranged between the third seal and the impeller side seal.

IPC 8 full level
F01D 11/00 (2006.01); **F01D 25/12** (2006.01); **F01D 25/18** (2006.01)

CPC (source: EP KR US)
F01D 11/003 (2013.01 - EP US); **F01D 25/125** (2013.01 - EP US); **F01D 25/16** (2013.01 - KR); **F01D 25/18** (2013.01 - KR); **F01D 25/183** (2013.01 - EP US); **F02B 39/00** (2013.01 - KR); **F02B 39/14** (2013.01 - KR); **F05D 2220/40** (2013.01 - EP US); **F05D 2240/58** (2013.01 - EP US); **F05D 2260/205** (2013.01 - EP US)

Citation (examination)
DE 102004055429 B3 20060810 - MAN B & W DIESEL AG [DE]

Citation (opposition)
Opponent : MAN Energy Systems AG
• US 4268229 A 19810519 - BERG PAUL H
• US 4389052 A 19830621 - SHIMIZU MASAMI [JP], et al
• WO 2010112864 A2 20101007 - CUMMINS TURBO TECH LTD [GB], et al
• US 5890881 A 19990406 - ADEFF GEORGE A [US]
• US 4157881 A 19790612 - KASUYA TAMOTSU [JP]
• US 4196910 A 19800408 - AIZU SHOICHI [JP]
• "splash oil cooling on turbine-side for NR20/S, NR24/S and NR29/S TURBOCHARGERS", DIESEL CUSTOMER INFORMATION KUNDEN INFORMATION CUS 217, May 2005 (2005-05-01), XP055645950
• "Turbocharger NR34/S- Splash oil cooling on turbine-side for specification starting from NR34/S040", DIESEL CUSTOMER INFORMATION KUNDEN INFORMATION CUS 230, November 2006 (2006-11-01), XP055645947

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EP2743460A1; CN103133064A

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)
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DOCDB simple family (application)
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