

Title (en)

LUBRICANT INJECTOR FOR LARGE SLOW-RUNNING TWO-STROKE ENGINE AND PRODUCTION METHOD

Title (de)

SCHMIERINJEKTOR FÜR GROSSEN LANGSAMEN ZWEITAKTMOTOR UND HERSTELLUNGSVERFAHREN

Title (fr)

INJECTEUR DE LUBRIFIANT POUR GRAND MOTEUR LENT À DEUX TEMPS ET SON PROCÉDÉ DE PRODUCTION

Publication

**EP 3289213 A1 20180307 (EN)**

Application

**EP 16720341 A 20160429**

Priority

- DK PA201570254 A 20150429
- DK PA201570790 A 20151202
- DK 2016050112 W 20160429

Abstract (en)

[origin: WO2016173601A1] Injectors for injection of lubrication oil into the cylinder of a large slow-running two-stroke engine, especially marine diesel engine, proved better uniform performance the when using hardened surfaces for the plain bearing in which the valve member slides. Also, hardened surfaces for valve seats at the nozzle was an improvement.

IPC 8 full level

**F02M 61/12** (2006.01); **F01M 1/08** (2006.01); **F02M 61/16** (2006.01); **F02M 63/00** (2006.01)

CPC (source: CN EP KR)

**F01M 1/08** (2013.01 - CN); **F02M 61/166** (2013.01 - KR); **F02M 63/004** (2013.01 - CN EP KR); **F02M 63/0071** (2013.01 - CN EP KR);  
**F01M 2001/083** (2013.01 - CN EP); **F02M 61/166** (2013.01 - CN EP); **F02M 2200/02** (2013.01 - CN EP KR);  
**F02M 2200/9038** (2013.01 - CN EP KR); **F02M 2200/9053** (2013.01 - CN EP KR)

Citation (search report)

See references of WO 2016173601A1

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**WO 2016173601 A1 20161103**; CN 107873069 A 20180403; CN 107873069 B 20210323; DK 179113 B1 20171106;  
DK 201570790 A1 20170102; EP 3289213 A1 20180307; EP 3289213 B1 20210113; KR 102510836 B1 20230315;  
KR 20170141762 A 20171226; SG 11201708772Y A 20171129

DOCDB simple family (application)

**DK 2016050112 W 20160429**; CN 201680025865 A 20160429; DK PA201570790 A 20151202; EP 16720341 A 20160429;  
KR 20177034262 A 20160429; SG 11201708772Y A 20160429