

Title (en)
MUFFLER

Title (de)
AUSPUFFTOPF

Title (fr)
SILENCIEUX

Publication
EP 3073076 A1 20160928 (EN)

Application
EP 16160265 A 20160315

Priority
JP 2015062898 A 20150325

Abstract (en)
Muffler (10) includes inner pipe (14) inserted into outer shell (12) and through which exhaust gas flows; and communication portions formed in a peripheral wall (26) of the inner pipe (14) and including holes that communicate a gas flow path of the inner pipe with a muffling chamber (24), each of the communication portions including: inside deformation portion formed by deforming a portion of the peripheral wall toward the pipe inside, and having a downstream side end portion separated from the peripheral wall; and outside deformation portion formed by deforming a portion of the peripheral wall adjacent to the downstream side of the inside deformation portion toward the pipe outside, and having an upstream side end portion separated from the peripheral wall, and wherein the hole is formed by the downstream side end portion of the inside deformation portion and the upstream side end portion of the outside deformation portion.

IPC 8 full level
F01N 1/00 (2006.01)

CPC (source: CN EP US)
F01N 1/006 (2013.01 - EP US); **F01N 1/02** (2013.01 - US); **F01N 13/007** (2013.01 - CN); **F01N 13/185** (2013.01 - US); **F01N 2260/06** (2013.01 - EP US); **F01N 2470/02** (2013.01 - EP US); **F01N 2470/04** (2013.01 - EP US)

Citation (applicant)
JP 2002047910 A 20020215 - SANGO CO LTD

Citation (search report)
• [A] US 6443255 B1 20020903 - SHAVENDER JR RICHARD WILLIAM [US]
• [A] WO 2005021944 A1 20050310 - OBERLAND MANGOLD GMBH [DE], et al
• [A] US 2010122682 A1 20100520 - HISANAGA TORU [JP], et al

Cited by
EP3822463A1; US11300021B2

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)
EP 3073076 A1 20160928; CN 106401722 A 20170215; JP 2016183564 A 20161020; US 2016281558 A1 20160929

DOCDB simple family (application)
EP 16160265 A 20160315; CN 201610146033 A 20160314; JP 2015062898 A 20150325; US 201615080664 A 20160325