

Title (en)  
Exhaust manifold with insulation sleeve

Title (de)  
Abgaskrümmer mit Isolationshülse

Title (fr)  
Collecteur de gaz d'échappement doté de manchon d'isolation

Publication  
**EP 2843207 B1 20161214 (DE)**

Application  
**EP 14166302 A 20140429**

Priority  
DE 102013109446 A 20130830

Abstract (en)  
[origin: US2015059324A1] An exhaust manifold for a combustion engine of a motor vehicle includes a two-shell construction comprised of an outer system and an inner system. A flange is positioned at a side proximal to a cylinder head of the combustion engine for installation to the combustion engine, and an insulation sleeve connects the inner system with the flange and the outer system. The insulation sleeve is sized to extend through an opening of the flange and to project beyond the flange into the cylinder head of the combustion engine.

IPC 8 full level  
**F01N 13/10** (2010.01); **F01N 13/18** (2010.01)

CPC (source: EP US)  
**F01N 13/102** (2013.01 - EP US); **F01N 13/1805** (2013.01 - EP US); **F01N 13/185** (2013.01 - EP US); **F01N 13/1872** (2013.01 - EP US); **F01N 13/1888** (2013.01 - EP US); **F01N 2450/20** (2013.01 - EP US); **F01N 2450/22** (2013.01 - EP US); **F01N 2470/26** (2013.01 - EP US)

Cited by  
FR3084109A1; CN112469892A; WO2020020828A1

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)  
**EP 2843207 A1 20150304; EP 2843207 B1 20161214**; CN 104420966 A 20150318; CN 104420966 B 20170412;  
DE 102013109446 A1 20150305; DE 102013109446 B4 20151126; ES 2611916 T3 20170511; US 2015059324 A1 20150305;  
US 9416719 B2 20160816

DOCDB simple family (application)  
**EP 14166302 A 20140429**; CN 201410293298 A 20140626; DE 102013109446 A 20130830; ES 14166302 T 20140429;  
US 201414455307 A 20140808