

Title (en)  
FINNED COAXIAL COOLER

Title (de)  
GERIPPTER KOAXIALER KÜHLER

Title (fr)  
REFROIDISSEUR COAXIAL À AILETTES

Publication  
**EP 3543636 B1 20230719 (EN)**

Application  
**EP 19169163 A 20170202**

Priority  
• GB 201701501 A 20170130  
• EP 17000163 A 20170202

Abstract (en)  
[origin: EP3355018A1] An improved heat exchanger suitable for use as a pre cooler in an internal combustion engine exhaust gas recirculation system comprises an inner heat exchange tube for exchanging heat between said gas and said liquid coolant. A tubular outer body may surround at least part of the inner heat exchange tube. Liquid coolant may flow through a cavity formed between the outer surface of the inner heat exchange tube and the inner surface of the tubular outer body, cooling gas flowing through the inner heat exchange tube. The inner heat exchange tube may surround a substantially cylindrical corrugated sheet of material forming a plurality of fins. At least one of the fins may be in contact with an inner surface of the inner heat exchange tube. The tubular outer body may surround two or more inner heat exchange tubes, each inner heat exchange tube surrounding a respective plurality of fins.

IPC 8 full level  
**F28D 7/10** (2006.01); **F02M 26/29** (2016.01); **F28D 21/00** (2006.01); **F28F 1/06** (2006.01); **F28F 1/08** (2006.01); **F28F 1/42** (2006.01)

CPC (source: EP GB)  
**F02M 26/29** (2016.02 - EP GB); **F28D 7/10** (2013.01 - GB); **F28D 7/103** (2013.01 - EP); **F28D 7/106** (2013.01 - EP); **F28D 7/14** (2013.01 - GB); **F28D 21/0003** (2013.01 - EP); **F28F 1/06** (2013.01 - EP); **F28F 1/08** (2013.01 - EP); **F28F 1/426** (2013.01 - EP)

Citation (examination)  
• JP H10170172 A 19980626 - SANGO CO LTD  
• JP 2000111277 A 20000418 - TOYOTA MOTOR CORP

Cited by  
CN113323775A

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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