

Title (en)

Method for making an exhaust manifold and exhaust manifold made thereby

Title (de)

Verfahren zur Herstellung eines Abgaskrümmers sowie nach diesem Verfahren hergestellter Abgaskrümmers

Title (fr)

Méthode de fabrication d' un collecteur d' échappement et collecteur d'échappement produit par cette méthode

Publication

EP 1241330 A3 20031008 (DE)

Application

EP 02004709 A 20020301

Priority

DE 10112707 A 20010316

Abstract (en)

[origin: DE10112707C1] To produce the exhaust manifold for an internal combustion motor, with a number of inlets from the cylinders and an outlet to the exhaust pipe, the part-shells (3-6) for the inner shell and the part-shells (1,2) for the outer shell are prefabricated. Each part-shell of the inner shell is fixed to a part-shell of the outer shell. The outer shell parts are joined together at the same time as the inner shell is formed by joining its part-shells. The outer shell parts are bonded together by a gas-tight seam.

IPC 1-7

F01N 7/10; **B21D 53/84**

IPC 8 full level

B21D 53/88 (2006.01); **F01N 13/10** (2010.01); **F01N 13/18** (2010.01)

CPC (source: EP)

B21D 53/88 (2013.01); **F01N 13/102** (2013.01); **F01N 13/1872** (2013.01); **F01N 13/1877** (2013.01)

Citation (search report)

- [A] DE 2945079 A1 19810521 - ZEUNA STAERKER KG [DE]
- [XAY] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 06 30 April 1998 (1998-04-30)
- [Y] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 01 31 January 1997 (1997-01-31)
- [A] PATENT ABSTRACTS OF JAPAN vol. 1996, no. 09 30 September 1996 (1996-09-30)
- [A] PATENT ABSTRACTS OF JAPAN vol. 1995, no. 01 28 February 1995 (1995-02-28)
- [A] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 05 30 April 1998 (1998-04-30)

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

DE 10112707 C1 20020606; EP 1241330 A2 20020918; EP 1241330 A3 20031008

DOCDB simple family (application)

DE 10112707 A 20010316; EP 02004709 A 20020301