

Title (en)  
EXHAUST MANIFOLD

Publication  
**EP 0178430 B1 19880601 (DE)**

Application  
**EP 85110556 A 19850822**

Priority  
DE 3434288 A 19840919

Abstract (en)  
[origin: EP0178430A1] 1. Exhaust manifold with a flange (15, 23) for its fixing to an engine block and exhaust pipes leading away from flange (15, 23), characterized in that the flange (15, 23) is constructed in laminated manner from at least two welded or soldered together sheet blanks (11, 15, 17, 18, 24, 27) which have an exhaust opening (12, 19, 28) for each exhaust pipe and in the vicinity of which a pipe socket (20) is welded or soldered to the flange (15, 23).

IPC 1-7  
**F01N 7/18; F01N 7/10**

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

CPC (source: EP)  
**F01N 13/10** (2013.01); **F01N 13/1805** (2013.01)

Cited by  
EP1365121A1; US8230680B2; DE10338382B4; DE102004051680A1; DE102004051680B4; DE102004051680C5; US6155045A; DE3717989A1; EP0918148A3; EP0918148A2; US8850805B2; DE102012011609A1

Designated contracting state (EPC)  
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**EP 0178430 A1 19860423; EP 0178430 B1 19880601**; AT E34805 T1 19880615; DE 3434288 A1 19860320; DE 3563090 D1 19880707

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**EP 85110556 A 19850822**; AT 85110556 T 19850822; DE 3434288 A 19840919; DE 3563090 T 19850822