

Title (en)  
Manifold

Title (de)  
Rohrkrümmer

Title (fr)  
Collecteur

Publication  
**EP 0623739 B1 19951220 (DE)**

Application  
**EP 94102305 A 19940216**

Priority  
DE 4314470 A 19930503

Abstract (en)  
[origin: EP0623739A1] The invention relates to a manifold (double manifold 1) for internal combustion engines with a tubular body (2, 3) produced by a metal forming process. Its open end can be connected to apertures (4 to 7) of a flange (8) on the engine-side. The wall of the tubular body has a collecting aperture, which faces a flange (11) on the exhaust side. In order to increase the fatigue strength of manifolds of this type, it is proposed to manufacture their tubular bodies (2, 3) in one part with different wall thickness by means of internal high pressure metal forming. At the same time, a pipe union leading from the collecting aperture to the aperture of the flange (9, 10) on the exhaust side is directly formed on. <IMAGE>

IPC 1-7  
**F01N 7/10; F01N 7/18; B21D 26/02**

IPC 8 full level  
**B21D 26/02** (2006.01); **B21D 26/055** (2011.01); **F01N 13/10** (2010.01); **F01N 13/18** (2010.01)

CPC (source: EP)  
**B21D 26/055** (2013.01); **F01N 13/10** (2013.01); **F01N 13/18** (2013.01); **F01N 13/1883** (2013.01)

Cited by  
EP0779418A1; EP0919704A1; EP0733788A3; EP1985388A1; EP0933509A1; DE19518252A1; GB2535001A; WO2008095705A1; US6343417B1; EP0733788A2; US6349468B1; US6519851B2; US6539764B2; EP0759120B1

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