

Title (en)

EXHAUST GAS PIPE FIXING DEVICE

Publication

**EP 0282497 B1 19900307 (DE)**

Application

**EP 87904237 A 19870703**

Priority

DE 3631312 A 19860913

Abstract (en)

[origin: WO8802060A1] System for fixing exhaust gas pipes (6), which are arranged in a space (2) sealed against said gases and serving to convey the combustion gases from the outlet openings of the cylinder head (9) to the exhaust gas manifold (5). In view of the high thermal stresses to which are subjected the exhaust pipes (6) which are not cooled in the gas-sealed space (2), the securing system is designed in such a way as not to exercise any reaction forces as a result of deformation due to temperature. Thus, the flanges (8) assembled with the exhaust pipes (6) are fixed at a single peripheral location respectively. This one-point fixing method allows radial and axial expansion, without reaction stresses, of the exhaust pipes (6) subjected to thermal stresses. Each pipe is screwed by means of securing screws (7), in the region of the extremities of the cylinder head (9) and preferably on the latter or on the walls of the elements forming the space which is sealed against the exhaust gases. Securing by means of screws is more reliable and has a space-saving effect.

IPC 1-7

**F01N 7/10; F01N 7/18; F02B 37/02**

IPC 8 full level

**F01N 13/08** (2010.01); **F01N 13/10** (2010.01); **F01N 13/18** (2010.01); **F02B 37/02** (2006.01)

CPC (source: EP US)

**F01N 13/1805** (2013.01 - EP US)

Citation (examination)

Patent Abstracts of Japan, Band 7, Nr. 25 (M-190)(1170) 2 Februar 1983 & JP-A-57181916 (Nissan Jidosha K.K.) 9 November 1982

Designated contracting state (EPC)

AT CH DE FR GB IT LI

DOCDB simple family (publication)

**DE 3631312 C1 19870702**; DE 3761837 D1 19900412; EP 0282497 A1 19880921; EP 0282497 B1 19900307; ES 2005904 A6 19890401; JP H0320573 B2 19910319; JP S63502684 A 19881006; SU 1701118 A3 19911223; US 4807436 A 19890228; WO 8802060 A1 19880324

DOCDB simple family (application)

**DE 3631312 A 19860913**; DE 3761837 T 19870703; DE 8700303 W 19870703; EP 87904237 A 19870703; ES 8702112 A 19870720; JP 50389687 A 19870703; SU 4355752 A 19880511; US 17187188 A 19880202