

Title (en)

Metal fusing material and method for manufacturing a carrier for a duct with metal fusing material

Title (de)

Metall-Fixiermaterial-Durchführung und Verfahren zur Fertigung eines Grundkörpers einer Metall-Fixiermaterial-Durchführung

Title (fr)

Réalisation de matériau de fixation en métal et procédé de fabrication d'un corps de base d'une réalisation de matériau de fixation en métal

Publication

EP 1808667 B1 20160608 (DE)

Application

EP 07006641 A 20040206

Priority

- EP 04002670 A 20040206
- DE 20303413 U 20030303
- DE 10321067 A 20030510
- DE 10326253 A 20030611
- DE 20314580 U 20030920

Abstract (en)

[origin: DE20314580U1] First (4) and second (5) metal pins fit in a through-opening (TO) (11) in a main body (MB) (3) in fastening equipment (FE) (6). Formed by an element, the MB has front (8) and rear (7) sides. A release action creates a principal geometry to describe the TO. Devices between the front and rear sides avoid relative movement in the FE towards the rear side opposite the inner circumference of the TO. An independent claim is also included for a method for producing a main body for a metal lead-through according to the present invention.

IPC 8 full level

F42B 3/198 (2006.01); **F42B 3/103** (2006.01); **F42B 3/12** (2006.01); **F42B 3/195** (2006.01)

CPC (source: EP)

F42B 3/103 (2013.01); **F42B 3/195** (2013.01); **F42B 3/198** (2013.01)

Citation (opposition)

- Opponent : Electrovac Hacht und Huber GmbH,
- DE 10133223 A1 20021017 - TRW AIRBAG SYS GMBH & CO KG [DE]
 - US 2002069781 A1 20020613 - AVETISIAN VAHAN [US], et al
 - US 5345872 A 19940913 - TAKAHASHI SAKAE [JP], et al
 - US 5732634 A 19980331 - FLICKINGER JOSEPH E [US], et al
 - EP 0137488 A2 19850417 - SCHOTT GLASWERKE [DE], et al
 - US 5321307 A 19940614 - MURAI NOBUHIRO [JP]
 - US 5943897 A 19990831 - TSUE HIROSHI [JP], et al
 - US 3134329 A 19640526 - SAMUEL ZEMAN
 - EP 0610925 A1 19940817 - TEVES GMBH ALFRED [DE]
 - US 6274252 B1 20010814 - NAUGLER ROBERT E [US], et al
 - DE 1957011 A1 19710527 - FISCHER BRODBECK GMBH PRAEZ ST
 - "gestaltungsregeln fur stanzteile aus Stahl veroffentlicht 1983", DIN 6932 VERÖFFENTLICHT 1983, XP055365297
 - "begriffe der stanztechnik", DIN 9870 VERÖFFENTLICHT 1972/1974, XP055365298
 - FEINTOOL AG LYSS, FEINSCHNEIDEN - HANDBUCH FÜR DIE VERÖFFENTLICHT 1977 PRAXIS, pages 22 - 31
 - DUBBEL: "Taschenbuch fur den maschinenbau", 01-01-1986, SPRINGER VERLAG, Berlin, pages: 336,337 - 986, XP055365693
 - 1997, Berlin, article WOLFGANG BEITZ: "Taschenbuch für den Maschinenbau", XP055259702

Cited by

DE102014007809A1; DE102013011851B3; US11578954B2; DE102014007809B4; US8733250B2; US10684102B2; US8276514B2; US8327765B2; US9423218B2; US9651345B2

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DOCDB simple family (publication)

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