

Title (en)

MULTI-PART ASSEMBLY AND FRICTION WELDING PROCESS FOR PRODUCING IT

Title (de)

MEHRTEILIGER AUFBAU UND REIBUNGSSCHWEISSVERFAHREN ZU SEINER HERSTELLUNG

Title (fr)

ASSEMBLAGE DE PIECES MULTIPLES ET PROCEDE DE SOUDAGE PAR FRICTION UTILISE POUR PRODUIRE CET ASSEMBLAGE

Publication

EP 0907455 A1 19990414 (EN)

Application

EP 97919594 A 19970509

Priority

- DE 19620814 A 19960523
- IB 9700529 W 19970509

Abstract (en)

[origin: DE19620814A1] The present invention relates to a process for producing a multi-part assembly, in particular a three-part assembly, in which at least one flat metal part (1) and one metallic base (2) are pressed onto one another to form a structure (4) to be connected, a connecting part (3, 3a) with a tapering end portion (5) and of a material with a higher melting point than that of the flat metal part (1) and the structure (4) are rotated relative to one another to form a molten material (7) and are pressed against one another until the connecting part (3, 3a) has penetrated the flat metal part (1), so molten material for forming a material welded joint (9) between the base (2) and the flat metal part (1) is brought therebetween. The invention also relates to a correspondingly produced multi-part connection and the formation of an associated connecting part (3). The preferred sphere of application is the connection of light metal parts, in particular body parts in automobile construction.

IPC 1-7

B23K 20/12

IPC 8 full level

B23K 20/12 (2006.01); **B23K 103/10** (2006.01); **B23K 103/12** (2006.01)

CPC (source: EP)

B23K 20/127 (2013.01); **B23K 20/129** (2013.01); **B23K 20/1295** (2013.01)

Citation (search report)

See references of WO 9744154A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

DE 19620814 A1 19971127; EP 0907455 A1 19990414; JP 2000510768 A 20000822; WO 9744154 A1 19971127

DOCDB simple family (application)

DE 19620814 A 19960523; EP 97919594 A 19970509; IB 9700529 W 19970509; JP 54191397 A 19970509