Title (en)
DEVICE FOR CLINCH JOINTS

Publication
EP 0366987 B1 19920129 (DE)

Application
EP 89118946 A 19891012

Priority
DE 3836937 A 19881029

Abstract (en)
[origin: JPH02155524A] PURPOSE: To firmly perform joining through single press process by pressing with a shape forming anvil of a female die and a forming member with a corresponding cylindrical recessed die when executing press joining of two sheets of metallic sheet pieces with male type and female dype dies. CONSTITUTION: An anvil 12 cylindrical and with a circular top surface is provided. A female die for press forming is formed of a socket 10 with slopes 14 on the both sides and two pieces of forming members 16 having semicylindrical recessed parts 18 in a shape surrounding the anvil 12 on both sides. Metallic sheets 34, 36 to be joined are placed on the forming members 16 of the female die, on which a male die 30 is mounted concentrically to the anvil 12 of the female die. The metallic sheets 34, 36 to be worked are pressed with a circular front part 32 having a shoulder part 38, so that the shoulder part 38 of the male die 30 may abut on the upper metallic sheet 34, and then with die-pressing by the anvil 12 of the female die and the sloping surface 14, the two pieces of metallic sheets 34, 36 decrease thickness to 1/3 of the initial thickness and the edge parts of the anvil slide transversely to form a projected beed 40, and thus the metallic sheets 34, 36 are firmly joined.

IPC 1-7
B21D 39/03; B23P 11/00

IPC 8 full level
B21D 39/03 (2006.01); B23P 11/00 (2006.01)

CPC (source: EP US)
B21D 39/031 (2013.01 - EP US); Y10T 29/53765 (2015.01 - EP US)

Cited by
DE19847794C1; US6240627B1; WO02081112A3

Designated contracting state (EPC)
AT BE CH DE ES FR GB IT LI LU NL SE

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EP 0366987 A1 19900509; EP 0366987 B1 19920129; AT E72152 T1 19920215; CA 2001636 A1 19900429; CA 2001636 C 19950606; DE 3836937 A1 19900503; DE 58900799 D1 19920312; ES 2030573 T3 19921101; JP 2515894 B2 19960710; JP H02155524 A 19900614; RU 1773238 C 19921030; US 4972565 A 19901127

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