Title (en)

New rivet-like joining point of sheet metals by cold flowing and machine tool for realizing such a connecting point

Title (de

Neuer nietartiger Verbindungspunkt für Bleche durch Kaltfliessen und Werkzeugmaschine zum Durchführen eines solchen Verbindungspunktes

Title (fr)

Nouveau point d'assemblage de flans de tÔle par fluage à froid et machine d'outils pour la réalisation d'un tel point d'assemblage

Publication

EP 0653255 B1 19980909 (FR)

Application

EP 93402793 A 19931117

Priority

- EP 93402793 A 19931117
- FR 9206218 A 19920521

Abstract (en)

[origin: FR2691388A1] A new assembling joint is claimed for sheet blanks by cold forming of the type in which circular cavities are simultaneously cut into two sheet blanks (7, 8) using a punch and a die. The two circular cavities are thereby embedded into each other and present, close to the bottom, an extension characterised in that the bottom of the circular cavities presents, at least, one boss extending into the interior of the cavities. The machine for producinmg these new assembling joints in sheet blanks by cold forming is also claimed, together with the tooling needed by such a machine. USE/ADVANTAGE - The machine for applying a new assembling joint to the assembly of sheet blanks by cold forming using the lapping technique to join the blanks as an alternative to spot welding. The assembly is totally mechanical and is less likely to damage any protective coatings on the sheets. It can also be used in the assembly of sheets of dissimilar such as sheets of steel and aluminium. The present joint used in the assembly of sheet blanks has the major advantage of allowing the counter rotation of sheets that have been joined whilst retaining the advantages of lap jointing over spot welding i.e. lower investment costs, lower power requirements, less pollution and the chance of inducing parasitic electrical currents that may affect numeric controllers or computers.

IPC 1-7

B21D 39/03

IPC 8 full level

B21D 39/03 (2006.01)

CPC (source: EP)

B21D 39/031 (2013.01)

Cited by

US7578055B2; WO03084694A1

Designated contracting state (EPC)

DE ES GB IT

DOCDB simple family (publication)

FR 2691388 A1 19931126; FR 2691388 B1 19970131; DE 69320969 D1 19981015; DE 69320969 T2 19990617; EP 0653255 A1 19950517; EP 0653255 B1 19980909; ES 2124291 T3 19990201

DOCDB simple family (application)

FR 9206218 A 19920521; DE 69320969 T 19931117; EP 93402793 A 19931117; ES 93402793 T 19931117