

Title (en)

QUICK CHANGE TOOLING METHOD AND APPARATUS

Title (de)

VERFAHREN UND VORRICHTUNG ZUM SCHNELLWECHSELN VON WERKZEUGEN

Title (fr)

PROCEDE ET APPAREIL POUR OUTILLAGE A CHANGEMENT RAPIDE

Publication

EP 0852522 B1 20021106 (EN)

Application

EP 96925270 A 19960701

Priority

- CA 2230271 A 19960701
- US 9611180 W 19960701

Abstract (en)

[origin: WO9800250A1] A quick change tooling method and apparatus has been devised for tube bending operations in which the bend die (34), clamp die (35) and pressure die (36) as well as mandrel and wiper die (37), if required, are preassembled along with a tube corresponding to the tube to be bent in that particular die assembly by releasable latches (52, 54) or other types of releasable connectors; and each preassembled die set as described can be removed, transported and relocated on a bending machine (10) as a complete assembly and in exact aligned operating position without readjustment. A lift mechanism (84) is provided to facilitate lifting of each die set.

IPC 1-7

B21D 7/04; **B21D 9/05**

IPC 8 full level

B21D 7/02 (2006.01); **B21D 7/024** (2006.01)

CPC (source: EP)

B21D 7/02 (2013.01); **B21D 7/024** (2013.01)

Cited by

US7293444B2; US7721582B2

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

WO 9800250 A1 19980108; CA 2230271 A1 19980108; EP 0852522 A1 19980715; EP 0852522 A4 19991215; EP 0852522 B1 20021106

DOCDB simple family (application)

US 9611180 W 19960701; CA 2230271 A 19960701; EP 96925270 A 19960701