

Title (en)

High pressure hydroforming press

Title (de)

Innenhochdruckumformungspress

Title (fr)

Presse de formage hydraulique sous pression élevée

Publication

**EP 1197274 A1 20020417 (EN)**

Application

**EP 01127374 A 19980416**

Priority

- EP 98914753 A 19980416
- US 4395097 P 19970416

Abstract (en)

An apparatus for hydroforming a tubular metal blank has a die structure (12) having an internal die surface defining a die cavity, said die cavity being constructed and arranged to receive the tubular metal blank; a hydroforming fluid source disposed higher than said die cavity, a hydraulically driven tube-end engaging structure being movable to longitudinally compress the tubular metal blank, said tube-end engaging structure constructed and arranged to receive hydroforming fluid; and a hydraulically driven pressure intensifying structure movable in response to hydraulic fluid pressure to pressurize said hydroforming fluid provided to the interior of the tubular metal blank and thereby expand a diameter of the blank, said hydraulically driven tube-end engaging structure being movable in response to hydraulic fluid pressure to enable said tube-end engaging structure to longitudinally compress the tubular metal blank and cause metal material of the diametrically expanded tubular blank to flow longitudinally inwardly in order to replenish a wall thickness of the diametrically expanded tubular metal blank and maintain the wall thickness thereof within a predetermined range. <IMAGE>

IPC 1-7

**B21D 26/02**

IPC 8 full level

**B21D 26/02** (2011.01); **B21D 26/041** (2011.01)

CPC (source: EP)

**B21D 26/041** (2013.01)

Citation (search report)

- [DA] US 3350905 A 19671107 - TAKASHI OGURA, et al
- [DA] GB 2057322 A 19810401 - MANNESMANN AG
- [DA] EP 0439764 A2 19910807 - EUROPA METALLI LMI [IT]
- [DA] EP 0497438 A1 19920805 - MANNESMANN AG [DE]

Cited by

CN103464563A; CN106457345A; CN117415211A; US10531520B2; WO2015162448A1

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