

Title (en)
Metal pipe bending apparatus.

Title (de)
Metallrohrbiegemaschine.

Title (fr)
Machine à plier des tubes métalliques.

Publication
EP 0268891 A1 19880601 (EN)

Application
EP 87116269 A 19871105

Priority
IT 1258486 A 19861121

Abstract (en)
The object of the invention is an apparatus for bending metal pipes, particularly pipes having a means and a great diameter. The apparatus is associated with a vertical press (1,2) and comprises two lower pipe-bearing cradle members (4) with their upper surface (104) being semi-circular in cross-section, and an upper pipe-bending saddle member (6) arranged between the two cradle members (4), with its lower surface (106) corresponding to an intrados part of a tore. At least the pipe-bending saddle member (6) and preferably also the pipe-bending cradle members (4) have each in the central region of their surface in contact with the pipe (T), two opposite lateral depressions (306,304) which are provided in symmetrical positions with respect to the longitudinal median vertical plane of the saddle member (6) or of the cradle member (4) in areas at 45 DEG of the said saddle member (6) or cradle member (4). The said depressions (306,304) are so sized that a slight pressure applied by means of the pipe-bending saddle member (6) on the pipe (T) to be bent on starting the bending thereof, causes an expanding of said pipe into the lateral depressions (306,304), so that conforming protuberances (T1,T2) are formed in said pipe, and a contact surface between pipe (T) and the pipe-bending saddle member (6) and between pipe (T) and the pipe-bearing member (4) is thus obtained, the said surface being of such a width that on subsequent by increasing the pressure as applied by means of the pipe-bending saddle member (6) up to obtain the moment of flexure which is required for bending the pipe (T), any specific pressure is prevented from being reached, which would be apt to produce the narrowing of said pipe.

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B21D 7/06

IPC 8 full level
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CPC (source: EP)
B21D 7/066 (2013.01)

Citation (search report)
• [A] US 1948474 A 19340220 - MEYER FRANK H
• [A] GB 690007 A 19530408 - WELLINGTON TUBE WORKS LTD
• [A] FR 1034267 A 19530721
• [A] FR 716470 A 19311221
• [A] FR 889424 A 19440110 - WESER FLUGZEUGBAU GES M B H
• [A] DE 3218662 A1 19831124 - LEYBOLD HERAEUS GMBH & CO KG [DE]

Cited by
CN113560386A; EP2090382A3; CN104438957A; ITUB20159272A1; CN117161761A; US11911819B2

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