

Title (en)

Supporting shaft with expandable elements

Title (de)

Wellenstützschaft mit ausdehnbaren Elementen

Title (fr)

Dispositif pour soutenir un arbre comprenant des éléments expansibles

Publication

**EP 1634703 A2 20060315 (EN)**

Appplication

**EP 05108217 A 20050907**

Priority

IT VI20040213 A 20040910

Abstract (en)

The invention is a supporting shaft (1) with expandable elements (4) comprising a cylindrical tubular member (2) with a plurality of expandable elements (4) installed on the outside of said tubular member (2) and connected to actuator units (6) that induce the radial displacement of said expandable elements (4) through operating means (7) controllable by an operator. Each actuator unit (6) comprises a plurality of slides (8) coupled slidingly and circumferentially to the outside of a central tubular element (9) that connects two facing and coaxial circular flanges (10, 11) fixed to the inner surface (2a) of the tubular member (2). Each slide (8) is connected to an expandable element (4) by means of a connecting rod (21) the ends of which are hinged to the slide (8) and to the expandable element (4). These hinges (22, 23) allow for various positions of the connecting rod (21) coming between a radial position coinciding with the maximum extension of the expandable elements (4) and a sloping position coinciding with the retracted position of the expandable elements (4).

IPC 8 full level

**B41F 27/10** (2006.01); **B31F 1/07** (2006.01)

CPC (source: EP US)

**B41F 27/10** (2013.01 - EP); **B41F 27/105** (2013.01 - EP); **B65H 75/243** (2013.01 - EP US)

Cited by

CN103508229A; CN111362066A; CN108313832A; CN107206780A; KR20170129100A; EP3275656A4; US10688777B2; US11305961B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

**EP 1634703 A2 20060315**; **EP 1634703 A3 20070411**; IT VI20040213 A1 20041210

DOCDB simple family (application)

**EP 05108217 A 20050907**; IT VI20040213 A 20040910