

Title (en)

Automatic frettage (interference fit) device for high pressure components, particularly for pipelines

Title (de)

Autofrettagenvorrichtung für Hochdruckbauteile, insbesondere für Rohrleitungen

Title (fr)

Dispositif d'auto-frettage pour composants haute pression, notamment pour conduites

Publication

**EP 2298940 B1 20120808 (DE)**

Application

**EP 09010857 A 20090825**

Priority

EP 09010857 A 20090825

Abstract (en)

[origin: EP2298940A1] The device for subjecting a high pressure component such as pipelines (5) with autofrettage pressure, comprises a high pressure generating unit associated to the high pressure component to be subjected for pressurization of the high pressure component with the autofrettage pressure, and a high pressure valve unit associated to the second end of the high pressure component, with a closure body (6) for closing a valve seat (24) to a flush channel formed on the high pressure valve unit during subjecting the high pressure component with the autofrettage pressure. The device for subjecting a high pressure component such as pipelines (5) with autofrettage pressure, comprises a high pressure generating unit associated to the high pressure component to be subjected for pressurization of the high pressure component with the autofrettage pressure, a high pressure valve unit associated to the second end of the high pressure component, with a closure body (6) for closing a valve seat (24) to a flush channel formed on the high pressure valve unit during subjecting the high pressure component with the autofrettage pressure in order to separate the high pressure component, and/or a pressure detection unit for detecting the autofrettage pressure. A high pressure channel is formed in the closure body for connecting the pressure detection unit with the high pressure component. The high pressure valve unit comprises an adapter nozzle for connecting with the second end of the high pressure component that forms an end of the valve seat turned away from the high pressure component for the closure body. The adapter nozzle is relocatably arranged in a valve base body (14) of the high pressure valve unit against a spring power. The valve base body is arranged on a piston rod (22) of a hydraulic cylinder. The first hydraulic cylinder is arranged for displacing the closure body in the valve base body of the high pressure valve unit and the second hydraulic cylinder is arranged for pressing the adapter nozzle against the second end of the high pressure component. The closure body is formed as high pressure tube or is connected with the high pressure tube. The closure body is formed through the adapter nozzle for connecting the high pressure valve unit with the second end of the high pressure component. The adapter nozzle is surrounded by the rinsing sleeve relocatably arranged against a spring force for connecting with an external edge of the second end of the high pressure component. Between the rinsing sleeve and the adapter nozzle, a column connected with the flushing channel is formed. A guide-controlled hydraulic cylinder is formed with a hollow piston rod on which the valve base body of the high pressure valve unit is arranged. The pressure detection unit is arranged at an end of a pressure connection turned away the high pressure component and formed in the piston rod. The flushing channel is formed as transverse bore in the valve base body of the high pressure valve unit.

IPC 8 full level

**B21D 26/02** (2011.01); **C21D 7/12** (2006.01)

CPC (source: EP)

**C21D 7/12** (2013.01)

Cited by

DE102011118484A1; CN102886458A; CN102764809A; CN114231716A; DE102017200917A1; WO2018134063A1; US11298737B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

**EP 2298940 A1 20110323**; **EP 2298940 B1 20120808**; PL 2298940 T3 20130131

DOCDB simple family (application)

**EP 09010857 A 20090825**; PL 09010857 T 20090825