

Title (en)

APPARATUS AND METHOD TO REMOTELY CONTROL FLUID FLOW IN TUBULAR STRINGS AND WELLBORE ANNULUS

Title (de)

VORRICHTUNG UND VERFAHREN ZUR FERNSTEUERUNG DES FLÜSSIGKEITSFLUSSES IN ROHRSTRÄNGEN UND BOHRLOCHRINGEN

Title (fr)

APPAREIL ET PROCÉDÉ POUR COMMANDER À DISTANCE L'ÉCOULEMENT DE FLUIDE DANS DES COLONNES TUBULAIRES ET UN ESPACE ANNULAIRE DE PUITS DE FORAGE

Publication

EP 4353946 A2 20240417 (EN)

Application

EP 24161399 A 20130411

Priority

- US 201313846946 A 20130318
- US 201261622572 P 20120411
- US 201261710823 P 20121008
- US 201261710887 P 20121008
- EP 21166706 A 20130411
- EP 13775108 A 20130411
- US 2013036238 W 20130411

Abstract (en)

An apparatus is disclosed for remotely controlling fluid flow in tubular string (110) and wellbore annulus (156), wherein the apparatus includes a body (200) defining the boundaries between an inner flow passage (152) through the apparatus and an annular flow passage (154) within the wellbore annulus (156), and wherein the body (200) comprises a controllable valve (220) disposed in the inner flow passage (152), the controllable valve (220) comprising at least one moveable element, and where the element is movable to a plurality of predetermined positions, positioned and arranged to alter fluid flow between the first end, the second end, and the at least one lateral hole (210), and where a predetermined position of movable element determines a desired altered fluid flow state of controllable valve (220).

IPC 8 full level

E21B 47/18 (2012.01)

CPC (source: EP US)

E21B 23/006 (2013.01 - EP); **E21B 34/06** (2013.01 - EP); **E21B 34/066** (2013.01 - EP); **E21B 34/14** (2013.01 - EP US);
E21B 2200/04 (2020.05 - EP)

Citation (applicant)

- US 4889199 A 19891226 - LEE PAUL B [CA]
- US 163161 A 18750511

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2013155343 A1 20131017; AU 2013245814 A1 20141120; AU 2017225142 A1 20171005; CA 2872673 A1 20131017;
CA 2872673 C 20210504; EP 2836673 A1 20150218; EP 2836673 A4 20160601; EP 3875731 A1 20210908; EP 3875731 B1 20240306;
EP 3875731 C0 20240306; EP 4353946 A2 20240417; EP 4353946 A3 20240612

DOCDB simple family (application)

US 2013036238 W 20130411; AU 2013245814 A 20130411; AU 2017225142 A 20170908; CA 2872673 A 20130411; EP 13775108 A 20130411;
EP 21166706 A 20130411; EP 24161399 A 20130411