

Title (en)

DUAL BARRIER INJECTION VALVE WITH A VARIABLE ORIFICE

Title (de)

DOPPELSPERRENEINSPRITZVENTIL MIT VARIABLER ÖFFNUNG

Title (fr)

SOUPAPE D'INJECTION À DOUBLE BARRIÈRE DOTÉE D'UN ORIFICE VARIABLE

Publication

EP 3289172 A4 20181003 (EN)

Application

EP 16784115 A 20160426

Priority

- US 201514697289 A 20150427
- US 2016029349 W 20160426

Abstract (en)

[origin: WO2016172736A1] A wireline retrievable injection valve for an oil or gas well has an internal valve that is initially moved to open a flapper safety valve and also opens to allow fluid flow through the valve. The internal valve includes a sleeve that opens the flapper safety valve and shields the flapper safety valve from fluid. In this manner the flapper valve is protected from being caused to "flutter" or "chatter" due to pressure variations in the fluid flow, which may damage the seat.

IPC 8 full level

E21B 34/12 (2006.01); **E21B 34/10** (2006.01)

CPC (source: EP)

E21B 34/10 (2013.01); **E21B 41/0078** (2013.01); **E21B 2200/05** (2020.05)

Citation (search report)

- [I] US 2013081824 A1 20130404 - HILL JR THOMAS G [US], et al
- [I] US 2013220624 A1 20130829 - HILL JR THOMAS G [US], et al
- [A] US 2012312540 A1 20121213 - LEFEBVRE LANCE LEO [CA]
- [A] US 2009071654 A1 20090319 - O'MALLEY EDWARD J [US], et al
- See references of WO 2016172736A1

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 2016172736 A1 20161027; BR 112017023274 A2 20180807; BR 112017023274 B1 20230207; CA 2984164 A1 20161027; EP 3289172 A1 20180307; EP 3289172 A4 20181003; MX 2017013862 A 20181129

DOCDB simple family (application)

US 2016029349 W 20160426; BR 112017023274 A 20160426; CA 2984164 A 20160426; EP 16784115 A 20160426; MX 2017013862 A 20160426