

Title (en)

DIAMOND HIGH TEMPERATURE SHEAR VALVE DESIGNED TO BE USED IN EXTREME THERMAL ENVIRONMENTS

Title (de)

HOCHTEMPERATURSCHERVENTIL AUS DIAMANT ZUR VERWENDUNG IN EXTREMEN THERMISCHEN UMGEBUNGEN

Title (fr)

VANNE À CISAILLEMENT HAUTE TEMPÉRATURE EN LOSANGE DESTINÉE À ÊTRE UTILISÉE DANS DES ENVIRONNEMENTS THERMIQUES EXTRÊMES

Publication

EP 3947908 A4 20230118 (EN)

Application

EP 20777792 A 20200326

Priority

- US 201916365998 A 20190327
- US 2020024840 W 20200326

Abstract (en)

[origin: EP3715582A1] A control valve assembly (48) for a downhole wellbore (21) including a body (60) formed partially from a magnetic material. A plunger (160) is moveably mounted in the body (60). A portion (164) of the plunger (160) is formed from a magnetic material. A magnetic circuit having a gap (171) is arranged within the control valve assembly (48). The portion (64) of the body (60) formed from a magnetic material defines a first portion (164) of the magnetic circuit and the portion of the plunger (160) formed from magnetic material forms another portion of the magnetic circuit. A solenoid (120) is mounted at the body (60) and is selectively activated to create a magnetic field across the gap (171) in the magnetic circuit causing the plunger (160) to move thereby narrowing the gap (171) to produce a pressure pulse in the wellbore (21).

IPC 8 full level

E21B 47/24 (2012.01)

CPC (source: EP)

E21B 47/24 (2020.05); **E21B 34/066** (2013.01)

Citation (search report)

- [XYI] WO 2017156107 A1 20170914 - BAKER HUGHES INC [US]
- [X] US 2001048091 A1 20011206 - ENOMOTO SHIGEIKU [JP], et al
- [YA] WO 2016187253 A1 20161124 - BAKER HUGHES INC [US]
- See references of WO 2020198420A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

EP 3715582 A1 20200930; EP 3715582 B1 20231213; EP 3947908 A1 20220209; EP 3947908 A4 20230118; WO 2020198420 A1 20201001

DOCDB simple family (application)

EP 20152711 A 20200120; EP 20777792 A 20200326; US 2020024840 W 20200326