

Title (en)

Thermally activated well perforating safety system

Title (de)

Thermisch aktiviertes Bohrlochperforierungssicherheitssystem

Title (fr)

Système de sécurité de perforation de puits activé thermiquement

Publication

EP 1930541 A2 20080611 (EN)

Application

EP 07254713 A 20071205

Priority

US 56763306 A 20061206

Abstract (en)

An explosives safety system (30,32) includes an explosive component (46), a blocking member (54) displaceable to selectively permit and prevent detonation of the explosive component, and a thermal actuator (56) responsive to temperature change and configured to displace the member in response to the temperature change. Another explosives safety system includes a thermal actuator with a material having a volume variable in response to the temperature change, and detonation of the explosive component being selectively permitted and prevented by the actuator when the material volume changes. A method of preventing undesired detonation of an explosive component includes the steps of: providing a material having a volume variable in response to a change in a temperature; positioning the material and the explosive component in a well, thereby increasing the material temperature; increasing the material volume in response to the increasing temperature; and permitting detonation of the explosive component in response to the increasing volume.

IPC 8 full level

E21B 43/1185 (2006.01); **F42C 15/34** (2006.01); **F42C 15/36** (2006.01); **F42C 15/44** (2006.01)

CPC (source: EP US)

E21B 43/1185 (2013.01 - EP US); **F42C 15/005** (2013.01 - EP US); **F42C 15/34** (2013.01 - EP US); **F42C 15/36** (2013.01 - EP US); **F42C 15/44** (2013.01 - EP US)

Citation (applicant)

US 6675896 B2 20040113 - GEORGE FLINT R [US]

Cited by

CN104822898A; EP2929134A4; RU2613648C2; US11111763B2; US11421514B2; US11566500B2; US11460281B2; US11377935B2; WO2019217301A1; WO2022055489A1; WO2014089194A1; US10077641B2; USD1016958S; US11834934B2

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 MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

EP 1930541 A2 20080611; CA 2612500 A1 20080606; NO 20076249 L 20080609; US 2008134922 A1 20080612

DOCDB simple family (application)

EP 07254713 A 20071205; CA 2612500 A 20071128; NO 20076249 A 20071204; US 56763306 A 20061206