

Title (en)

Autonomous inflow restrictors for use in a subterranean well

Title (de)

Autonome Zuflussbegrenzer zur Verwendung in einem unterirdischen Bohrloch

Title (fr)

Restricteurs autonomes de flux entrant pour utilisation dans un puits souterrain

Publication

**EP 2146049 A2 20100120 (EN)**

Application

**EP 09160228 A 20070810**

Priority

- EP 07814000 A 20070810
- US 46602206 A 20060821

Abstract (en)

Autonomous flow restrictors for use in a subterranean well. An apparatus is disclosed for use in a well wherein both oil and gas are produced. The apparatus includes multiple flow blocking members (7) having a density less than that of the oil. The members are positioned within a chamber (24) with the members increasingly restricting a flow of the gas out of the chamber through multiple outlets (4). Another apparatus is disclosed for restricting production of at least one undesired fluid which has a density different from a density of a desired fluid. The apparatus includes at least one flow restrictor and at least one bypass flow restrictor. The bypass restrictor may have a greater restriction to flow therethrough as compared to the other flow restrictor. The apparatus further includes multiple flow blocking members operative to increasingly restrict flow of the undesired fluid through the flow restrictor in response to an increased proportion of the undesired fluid.

IPC 8 full level

**E21B 34/08** (2006.01); **E21B 43/12** (2006.01)

CPC (source: EP US)

**E21B 34/08** (2013.01 - EP US); **E21B 43/12** (2013.01 - EP US)

Cited by

WO2012036917A3; US8356668B2; US8376047B2; US8235128B2; US8261839B2; US8276669B2

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)

**US 2008041580 A1 20080221**; AU 2007286918 A1 20080228; BR PI0715720 A2 20130917; EP 2052128 A2 20090429; EP 2146049 A2 20100120; MX 2009001906 A 20090309; NO 20091161 L 20090318; WO 2008024645 A2 20080228; WO 2008024645 A3 20080424

DOCDB simple family (application)

**US 46602206 A 20060821**; AU 2007286918 A 20070810; BR PI0715720 A 20070810; EP 07814000 A 20070810; EP 09160228 A 20070810; MX 2009001906 A 20070810; NO 20091161 A 20090318; US 2007075743 W 20070810