

Title (en)

DOWN HOLE PHYSICAL UPGRADING OF HEAVY CRUDE OILS BY SELECTIVE ENERGY ABSORPTION

Title (de)

PHYSIKALISCHE VERBESSERUNG VON SCHWEREN ROHÖLEN IM BOHRLOCH DURCH SELEKTIVE ENERGIEAUFNAHME

Title (fr)

AMELIORATION PHYSIQUE FOND DE TROU DES HUILES BRUTES LOURDES PAR ABSORPTION SELECTIVE D'ENERGIE

Publication

**EP 1871984 A2 20080102 (EN)**

Application

**EP 06719067 A 20060119**

Priority

- US 2006002098 W 20060119
- US 64515405 P 20050119

Abstract (en)

[origin: WO2006078946A2] The present invention utilizes the ability of electromagnetic energy at the appropriate frequency to selectively deposit thermal energy in the heavy oil for precise control of cracking temperature throughout a given volume of material. Selective electromagnetic energy absorption in the heavy crude oil provides energy efficient transfer of heat at the molecular level and thereby insures precise temperature control throughout the treatment volume. This allows for optimization of the visbreaking process using electromagnetic energy.

IPC 8 full level

**E21B 43/24** (2006.01); **E21B 36/04** (2006.01)

CPC (source: EP US)

**E21B 36/04** (2013.01 - EP US); **E21B 43/2401** (2013.01 - EP US)

Citation (search report)

See references of WO 2006078946A2

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 NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

**WO 2006078946 A2 20060727; WO 2006078946 A3 20061109**; AR 053537 A1 20070509; CA 2595293 A1 20060727; CN 101142372 A 20080312; EP 1871984 A2 20080102; MX 2007008798 A 20080310; US 2006180304 A1 20060817

DOCDB simple family (application)

**US 2006002098 W 20060119**; AR P060100206 A 20060119; CA 2595293 A 20060119; CN 200680008885 A 20060119; EP 06719067 A 20060119; MX 2007008798 A 20060119; US 33584606 A 20060119