

Title (en)

Homogenizer/high shear mixing process for on-the-fly hydration of fracturing fluids and on-the-fly mixing of cement slurries

Title (de)

Homogenisierapparat/Mischverfahren mit hoher Scherkraft zur Direkt-Hydratisierung von Frakturierungsflüssigkeiten und zur Direkt-Mischung von Zementschlamm

Title (fr)

Homogénéisateur/Procédé de mélange pour l'hydratation instantanée des fluides de fracturation et mélange instantanée du ciment

Publication

EP 0845291 A1 19980603 (EN)

Application

EP 97309589 A 19971127

Priority

- CA 2191690 A 19961129
- CA 2220972 A 19971120

Abstract (en)

A method and apparatus for rapidly hydrating a hydratable gel comprising the steps of introducing a predetermined amount of the gel into a stream of hydrating fluid, pumping the stream into a high shear rate mixer having a shear rate of at least 25,000 s⁻¹, and directing the hydrated fluid away from the mixer means for treatment of a subterranean formation. <IMAGE>

IPC 1-7

B01F 3/12; **B01F 13/10**; **B28C 5/08**; **C08J 3/075**; **B02C 7/175**; **E21B 43/26**; **B01F 7/16**

IPC 8 full level

B01F 3/08 (2006.01); **B01F 3/12** (2006.01); **B01F 7/16** (2006.01); **B01F 13/10** (2006.01); **B28C 5/08** (2006.01)

CPC (source: EP)

B01F 23/405 (2022.01); **B01F 23/51** (2022.01); **B01F 27/80** (2022.01); **B01F 33/80** (2022.01); **B28C 5/08** (2013.01); **B01F 2101/49** (2022.01)

Citation (search report)

- [X] GB 1500901 A 19780215 - CEMENTATION RES LTD
- [X] US 4828034 A 19890509 - CONSTIEN VERNON G [US], et al
- [X] US 5046856 A 19910910 - MCINTIRE WILLIAM R [US]
- [X] US 5052486 A 19911001 - WILSON JAMES C [US]
- [A] US 3741533 A 19730626 - WINN F
- [A] EP 0239148 A1 19870930 - SCHLUMBERGER CIE DOWELL [FR]
- [A] EP 0186552 A2 19860702 - ELF FRANCE [FR]

Cited by

AU2009220989B2; EP1693102A3; EP1712271A3; US8393390B2; EP1693102A2; WO2015076784A1; US9447313B2; US9353585B2; WO2009109758A3; WO2013173033A1; US9452394B2; US9592479B2; US9771512B2; US10124307B2

Designated contracting state (EPC)

AT DE DK FR GB IT NL

DOCDB simple family (publication)

EP 0845291 A1 19980603; CA 2220972 A1 19980310; CA 2220972 C 19990309; ID 19015 A 19980604; NO 975485 D0 19971128; NO 975485 L 19980602

DOCDB simple family (application)

EP 97309589 A 19971127; CA 2220972 A 19971120; ID 973792 A 19971127; NO 975485 A 19971128