

Title (en)

Method and apparatus for cleaning wells by means of ultrasound

Title (de)

Verfahren und Vorrichtung zum Reinigen von Brunnen mit Hilfe von Ultraschall

Title (fr)

Méthode et dispositif pour le nettoyage de puits par moyen d'ultrason

Publication

EP 0733779 A3 19971022 (DE)

Application

EP 96101406 A 19960201

Priority

DE 19510421 A 19950324

Abstract (en)

[origin: EP0733779A2] Wells are cleaned by ultrasound, generated by magnetostriction. Pref. the transducer surfaces radiate sound at a power of 8012 W/cm<2>, at frequencies in the range 18-25 kHz, pref. at 20 kHz. The heads are pref. perpendicular to the shaft wall (16) and are excited with longitudinal oscillations and resonance frequencies. A unit consisting of ultrasound transducers and dirty water pump, first cleans a designated region. The unit then is moved vertically for the next cycle, the dirty water being extracted. Pref. the transducer surfaces radiate sound at a power of 8-12 W/cm<2>, at frequencies in the range 18-25 kHz, pref. at 20 kHz. The heads are perpendicular to the shaft wall (16) and are excited with longitudinal oscillations and resonance frequencies.

IPC 1-7

E21B 37/08; **E03B 3/15**

IPC 8 full level

B06B 1/08 (2006.01); **E03B 3/15** (2006.01); **E21B 28/00** (2006.01); **E21B 37/08** (2006.01)

CPC (source: EP)

B06B 1/08 (2013.01); **E21B 28/00** (2013.01); **E21B 37/08** (2013.01)

Citation (search report)

- [X] US 5184678 A 19930209 - PECHKOV ANDREY A [SU], et al
- [A] WO 9324199 A1 19931209 - MOBIL OIL CORP [US]
- [A] EP 0225113 A2 19870610 - WESTINGHOUSE ELECTRIC CORP [US]
- [X] DATABASE WPI Section PQ Week 8643, 3 December 1986 Derwent World Patents Index; Class Q42, Page 12, AN 86211444, XP002039041

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CN112627779A; DE29711422U1; EP0778393A3; DE202019100359U1

Designated contracting state (EPC)

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DOCDB simple family (publication)

EP 0733779 A2 19960925; **EP 0733779 A3 19971022**; **EP 0733779 B1 20021218**; AT E230062 T1 20030115; DE 59609982 D1 20030130

DOCDB simple family (application)

EP 96101406 A 19960201; AT 96101406 T 19960201; DE 59609982 T 19960201