

Title (en)
WORKING FLUID FOR BRITTLE AND HARD MATERIALS

Title (de)
ARBEITSFLÜSSIGKEIT FÜR SPRÖDE HARTE MATERIALIEN

Title (fr)
FLUIDE DE TRAVAIL POUR MATÉRIAUX FRAGILES ET DURS

Publication
EP 2415853 B1 20140115 (EN)

Application
EP 10758452 A 20100319

Priority
• JP 2010054813 W 20100319
• JP 2009086107 A 20090331

Abstract (en)
[origin: EP2415853A1] Provided is a water-containing working fluid for a brittle material and a hard material, which includes (A) water, (B) a water soluble polymeric compound having an oxygen-containing group and a number average molecular weight of 6,000 to 3,000,000, and (C) a nonionic surfactant having a clouding point of 10 to 70°C in a 1% by mass aqueous solution. In a loose-abrasive grain method, the working fluid allows a slurry thereof to be supplied into the working gap sufficiently and has excellent abrasive grain dispersion stability and excellent properties to wash and disperse cutting swarf. In a method using a fixed-abrasive grain wire saw, the working fluid rarely causes detachment of the fixed abrasive grains and has excellent properties to wash and disperse cutting swarf.

IPC 8 full level
C10M 173/02 (2006.01); **C10N 10/02** (2006.01); **C10N 20/04** (2006.01); **C10N 30/02** (2006.01); **C10N 30/06** (2006.01); **C10N 40/32** (2006.01)

CPC (source: EP US)
C10M 173/02 (2013.01 - EP US); **C10M 2207/022** (2013.01 - EP US); **C10M 2207/126** (2013.01 - EP US); **C10M 2209/084** (2013.01 - EP US); **C10M 2209/10** (2013.01 - EP US); **C10M 2209/103** (2013.01 - EP US); **C10M 2209/104** (2013.01 - EP US); **C10M 2209/107** (2013.01 - EP US); **C10M 2215/042** (2013.01 - EP US); **C10N 2020/011** (2020.05 - EP US); **C10N 2020/04** (2013.01 - EP US); **C10N 2030/02** (2013.01 - EP US); **C10N 2030/04** (2013.01 - EP US); **C10N 2030/06** (2013.01 - EP US); **C10N 2040/32** (2013.01 - EP US)

Cited by
US9260643B2; US9803156B2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)
EP 2415853 A1 20120208; EP 2415853 A4 20121226; EP 2415853 B1 20140115; CN 102369268 A 20120307; JP 5639996 B2 20141210; JP WO2010113678 A1 20121011; KR 20120006494 A 20120118; SG 174950 A1 20111128; TW 201042028 A 20101201; TW I467009 B 20150101; US 2012058924 A1 20120308; WO 2010113678 A1 20101007

DOCDB simple family (application)
EP 10758452 A 20100319; CN 201080015875 A 20100319; JP 2010054813 W 20100319; JP 2011507094 A 20100319; KR 20117022728 A 20100319; SG 2011070422 A 20100319; TW 99109163 A 20100326; US 201013259611 A 20100319