Title (en)

Excavator method

Title (de)

TIX-Baggerverfahren

Title (fr)

Procédé d'excavation

Publication

EP 2484838 A1 20120808 (DE)

Application

EP 11153674 A 20110208

Priority

EP 11153674 A 20110208

Abstract (en)

The method of removing sandy and/or silt deposits on a bottom surface of water using hydropneumatic methods such as water injection and suction dredging, comprises exposing the force reducing the viscosity of the deposit on the bottom surface before the application of hydropneumatic removal process, where the force acting on the deposit surface causes vibration and shear stress on the deposit, converting the treated deposit in a fluid density layer using a water-injection process, removing the deposit by a suction dredge method, and partially separating the removed material. The method of removing sandy and/or silt deposits on a bottom surface of water using hydropneumatic methods such as water injection and suction dredging, comprises exposing the force reducing the viscosity of the deposit on the bottom surface before the application of hydropneumatic removal process, where the force acting on the deposit surface causes vibration and shear stress on the deposit, converting the treated deposit in a fluid density layer using a water-injection process, removing the deposit by a suction dredge method, partially separating the removed material from the aspirated water, and recycling the separated water by suction hopper dredging. The sand/silt deposit exhibits thixotropic properties and a linear particle size distribution in the sand fraction, and comprises platelet-like particles. An independent claim is included for an apparatus for removing sandy/silty soil deposits on surfaces of water bodies.

Abstract (de)

Verfahren zur Entfernung sandiger und/oder schluffiger Ablagerungen auf Bodenflächen von Gewässern mittels hydropneumatischer Verfahren, insbesondere Wasserinjektion, Saugbaggerung oder dergleichen, dadurch gekennzeichnet, dass man die zu entfernende sandig/schluffige Ablagerung, vor der Anwendung des hydropneumatischen Entfernungsverfahrens, einer Krafteinwirkung aussetzt, die die Viskosität der Ablagerung verringert.

IPC 8 full level

E02F 3/92 (2006.01)

CPC (source: EP)

E02F 3/9287 (2013.01)

Citation (applicant)

- DE 102009015203 A1 20101216 - BOLLS THORSTEN [DE]
- MEYER-NEHLS, DAS WASSERINJEKTIONSVERFAHREN. ERGEBNISSE AUS DEM BAGGERGUTUNTERSUCHUNGSPROGRAMM, vol. 8, October 2000 (2000-10-01)

Citation (search report)

- [X] FR 2860532 A1 20050408 - POTEUR MICHEL [FR]
- [X] DE 2256627 A1 19740522 - HELD & FRANCKE BAU AG
- [X] US 5146699 A 19920915 - LIPFORD KEITH W [US]

Cited by

WO2016055119A1

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2484838 A1 20120808; EP 2683878 A1 20140115; WO 2012107180 A1 20120816

DOCDB simple family (application)

EP 11153674 A 20110208; EP 12703693 A 20120201; EP 2012000449 W 20120201