

Title (en)

MINERAL LIFTING SYSTEM AND MINERAL LIFTING METHOD

Title (de)

MINERALAUSHEBESYSTEM UND MINERALAUSHEBEVERFAHREN

Title (fr)

SYSTÈME DE LEVAGE DE MINÉRAUX ET PROCÉDÉ DE LEVAGE DE MINÉRAUX

Publication

**EP 3342976 A1 20180704 (EN)**

Application

**EP 16841180 A 20160406**

Priority

- JP 2015182281 A 20150828
- JP 2016061280 W 20160406

Abstract (en)

A mineral lifting system S includes a seabed working machine 13, having an excavator 131, excavating minerals at a seabed, and a slurry pump 132, sucking in and pumping a solid-liquid mixture of the minerals and seawater, a generator, supplying electric power to the seabed working machine 13 by an electric power cable 12, a main float 20, a mineral lifting pipe 21, conveying the solid-liquid mixture to the main float 20 side, auxiliary floats 22, mounted to the mineral lifting pipe 21 at predetermined intervals and imparting a buoyancy, and a sorting unit 3, sorting and collecting the minerals from the solid-liquid mixture conveyed to the main float 20 side.

IPC 8 full level

**E21C 50/00** (2006.01)

CPC (source: EP KR US)

**E02F 3/8858** (2013.01 - US); **E02F 3/905** (2013.01 - US); **E02F 5/006** (2013.01 - US); **E21B 17/01** (2013.01 - US); **E21B 17/012** (2013.01 - EP US); **E21C 50/00** (2013.01 - EP KR US)

Cited by

WO2021197784A1

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 3342976 A1 20180704**; **EP 3342976 A4 20190807**; AU 2016314824 A1 20180308; CA 2964213 A1 20170309; CN 107075946 A 20170818; JP 6208401 B2 20171011; JP WO2017038148 A1 20170831; KR 102019197 B1 20191104; KR 20180035891 A 20180406; TW 201736199 A 20171016; US 2018187395 A1 20180705; WO 2017038148 A1 20170309

DOCDB simple family (application)

**EP 16841180 A 20160406**; AU 2016314824 A 20160406; CA 2964213 A 20160406; CN 201680003371 A 20160406; JP 2016061280 W 20160406; JP 2017510600 A 20160406; KR 20187006199 A 20160406; TW 106106507 A 20170224; US 201615523026 A 20160406