

Title (en)
DISSOLVED AIR FLOTATION, ANTISOLVENT CRYSTALLISATION AND MEMBRANE SEPARATION FOR SEPARATING BUOYANT MATERIALS AND SALTS FROM WATER

Title (de)
FLOTATION GELÖSTER LUFT, ANTIÖSUNGSMITTEL-KRISTALLISATION UND MEMBRANTRENNUNG ZUR ABSCHIEDUNG SCHWIMMENDER MATERIALIEN UND SALZE AUS WASSER

Title (fr)
FLOTTATION PAR AIR DISSOUS, CRISTALLISATION D'ANTISOLVANT ET SÉPARATION MEMBRANAIRE SERVANT À SÉPARER LES MATIÈRES FLOTTANTES ET LES SELS DE L'EAU

Publication
EP 2928612 A1 20151014 (EN)

Application
EP 13811334 A 20131206

Priority
• US 201261734491 P 20121207
• US 201261735211 P 20121210
• US 201361757891 P 20130129
• US 201361768486 P 20130224
• US 201361784099 P 20130314
• US 201361786942 P 20130315
• US 201361878861 P 20130917
• US 2013073598 W 20131206

Abstract (en)
[origin: WO2014089443A1] Systems, methods, and apparatus for removing materials from liquid, such as water. The system, methods, and apparatus allow for separation of neutrally buoyant materials from liquid via flotation to or near the surface of the liquid via air bubbles. The system, methods, and apparatus allow for the selective separation of an element, such as strontium, from the liquid. The system, methods, and apparatus allow for precipitating a water soluble salt or water soluble salts from water, including adding a water-miscible solvent to a water solution including an inorganic salt. And, the system, method and apparatus also allow for the separation of the precipitated salt, and for separation of the solvent from the water.

IPC 8 full level
B03D 1/016 (2006.01); **B01D 1/14** (2006.01); **B01D 9/00** (2006.01); **B01D 63/00** (2006.01); **B01D 65/00** (2006.01); **B01F 23/00** (2022.01); **C02F 1/24** (2006.01); **C02F 1/54** (2006.01)

CPC (source: EP)
B01D 9/0031 (2013.01); **B01D 9/0036** (2013.01); **B01D 9/0054** (2013.01); **B01D 61/04** (2013.01); **B01D 65/08** (2013.01); **B03D 1/016** (2013.01); **B03D 1/1431** (2013.01); **C02F 1/048** (2013.01); **C02F 1/24** (2013.01); **C02F 1/5236** (2013.01); **B01D 2311/04** (2013.01); **B01D 2311/2642** (2013.01); **B03D 1/008** (2013.01); **B03D 1/01** (2013.01); **B03D 2201/007** (2013.01); **B03D 2203/008** (2013.01); **C02F 1/08** (2013.01); **C02F 1/385** (2013.01); **C02F 1/40** (2013.01); **C02F 1/441** (2013.01); **C02F 1/444** (2013.01); **C02F 1/56** (2013.01); **C02F 1/66** (2013.01); **C02F 1/68** (2013.01); **C02F 2001/007** (2013.01); **C02F 2001/5218** (2013.01); **C02F 2101/10** (2013.01); **C02F 2103/08** (2013.01); **C02F 2103/10** (2013.01); **C02F 2303/20** (2013.01); **C02F 2303/22** (2013.01); **C02F 2305/04** (2013.01)

Citation (search report)
See references of WO 2014089443A1

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)
WO 2014089443 A1 20140612; AU 2013355091 A1 20140612; BR 112015013277 A2 20170711; CA 2894162 A1 20140612; CL 2015001527 A1 20160108; CN 105451888 A 20160330; EP 2928612 A1 20151014; IL 239165 A0 20150730; JP 2016504186 A 20160212; MX 2015007184 A 20160307; PE 20151201 A1 20150831; SG 11201504419R A 20150730

DOCDB simple family (application)
US 2013073598 W 20131206; AU 2013355091 A 20131206; BR 112015013277 A 20131206; CA 2894162 A 20131206; CL 2015001527 A 20150604; CN 201380071816 A 20131206; EP 13811334 A 20131206; IL 23916515 A 20150603; JP 2015545875 A 20131206; MX 2015007184 A 20131206; PE 2015000761 A 20131206; SG 11201504419R A 20131206