



(51) International Patent Classification:

C02F 1/52 (2006.01) C02F 1/68 (2006.01)
C02F 1/56 (2006.01)

(21) International Application Number:

PCT/US2019/041751

(22) International Filing Date:

15 July 2019 (15.07.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/699,335 17 July 2018 (17.07.2018) US

(71) Applicant: **EXTRAKT PROCESS SOLUTIONS, LLC**
[US/US]; 140 Turner Ct, Bowling Green, Kentucky 42101
(US).

(72) Inventors: **PAINTER, Paul C.**; c/o IL Fuels, LLC, 123
South Academy Street, Boalsburg, Pennsylvania 16827
(US). **MILLER, Bruce G.**; c/o IL Fuels, LLC, 123 South
Academy Street, Boalsburg, Pennsylvania 16827 (US).

LUPINSKY, Aron; c/o IL Fuels, LLC, 123 South Academy
Street, Boalsburg, Pennsylvania 16827 (US).

(74) Agent: **BUCCA, Daniel** et al.; Morgan, Lewis & Bockius
LLP, 1111 Pennsylvania Ave NW, Washington, District of
Columbia 20004 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,
KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,
OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA,
SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,

(54) Title: TREATMENT OF TAILINGS

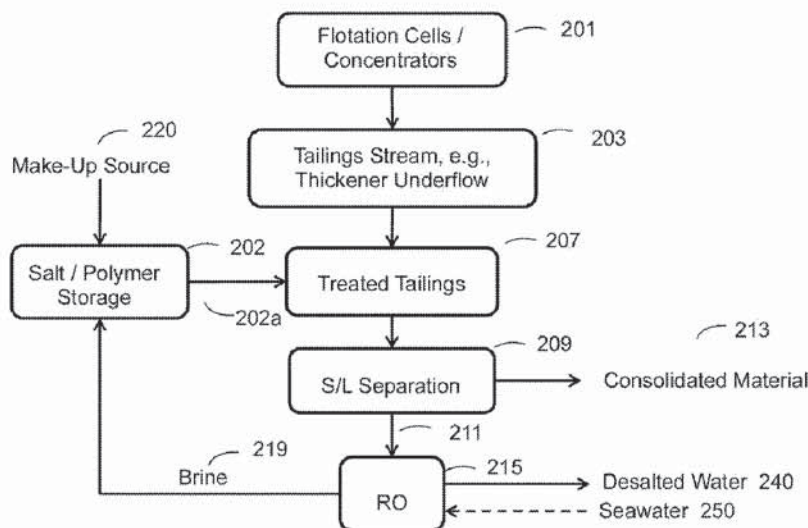


FIG. 1B

(57) Abstract: Processes of consolidating tailings such as from metal and non-metal based ore processes are disclosed. The processes include mixing tailings with a high concentration of a highly water soluble salt or an aqueous solution thereof to destabilize and consolidate solids in the tailings and separating the consolidated solids from process water.



EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))