



(51) International Patent Classification:

B01D 33/03 (2006.01) **B07B 1/28** (2006.01)
B01D 63/16 (2006.01) **B07B 1/40** (2006.01)

(21) International Application Number:

PCT/AU2014/000827

(22) International Filing Date:

20 August 2014 (20.08.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2013903149 20 August 2013 (20.08.2013) AU

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(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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, 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, 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).

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(54) Title: SEPARATION OF MATERIALS

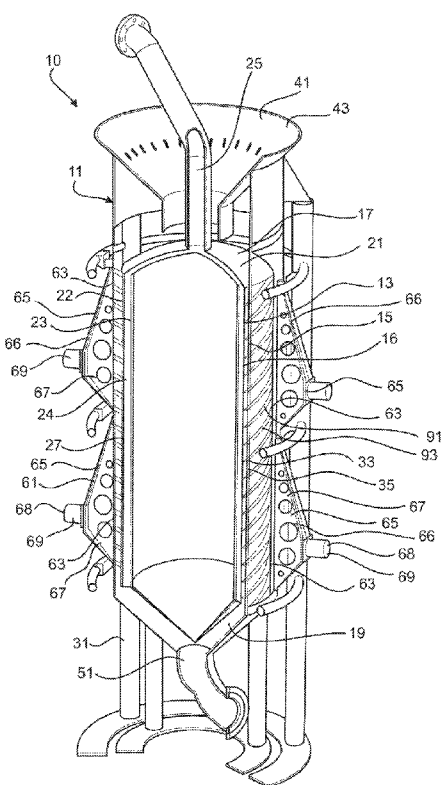


Fig. 1

(57) Abstract: A separation system (10) comprising a chamber (13) for receiving feed material comprising fluid containing solid particles of various sizes. The chamber (13) is bounded by a flexible medium (35) which provides a selective barrier through which selected undersize solid particles can pass but not particles larger than the undersize solid particles. A vibrator (61) is provided for vibrating the flexible medium (35) to facilitate passage of fluid and solid particles through the flexible medium, wherein the vibration causes the flexible medium to oscillate towards and away from fluid within the chamber (13). The vibration typically induces fracturing of agglomerated matter comprising the solid particles within the fluid, leading to fragmentation of the agglomerated matter into the oversize solids and the undersize solids. The vibration also has the effect of introducing a frequency of vibration or a shock wave into the liquid surface at the interface with the flexible medium (35) and across the flexible medium (35).



Published:

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