



(51) International Patent Classification:

B02C 23/08 (2006.01) *B09B* 3/35 (2022.01)
B01D 46/00 (2022.01) *B29B* 17/00 (2006.01)
B02C 13/288 (2006.01) *C08J* 11/06 (2006.01)
B09B 3/30 (2022.01)

(21) International Application Number:

PCT/CA2022/051011

(22) International Filing Date:

23 June 2022 (23.06.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

3,123,240 25 June 2021 (25.06.2021) CA
3,145,069 07 January 2022 (07.01.2022) CA

(71) Applicant: **TORXX KINETIC PULVERIZER LIMITED** [GB/GB]; 4th Floor Williams House, 20 Reid Street, Hamilton, HM11 (BM).

(72) Inventor: **BELANGER, Nicolas** (*deceased*).

(72) Inventors: **DROLET, Michael**; c/o TORXX KINETIC PULVERIZER LIMITED, 4th Floor Williams House, 20 Reid Street, Hamilton, HM11 (BM). **EVERSON, Peter**; c/o TORXX KINETIC PULVERIZER LIMITED, 4th Floor Williams House, 20 Reid Street, Hamilton, HM11 (BM). **WARD, Terri**; c/o TORXX KINETIC PULVERIZER LIMITED, 4th Floor Williams House, 20 Reid Street, Hamilton, HM11 (BM). **MUELLER, Christopher**; 119-80 Burns Blvd, King City, Ontario L7B 0B3 (CA).

(74) Agent: **ROBIC S.E.N.C.R.L. / LLP**; 630 Rene-Levesque Blvd W, 20th Floor, Montréal, Québec H3B 1S6 (CA).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM,

(54) Title: PROCESS FOR TREATING FINES STREAM DERIVED FROM WASTE PROCESSING FACILITIES

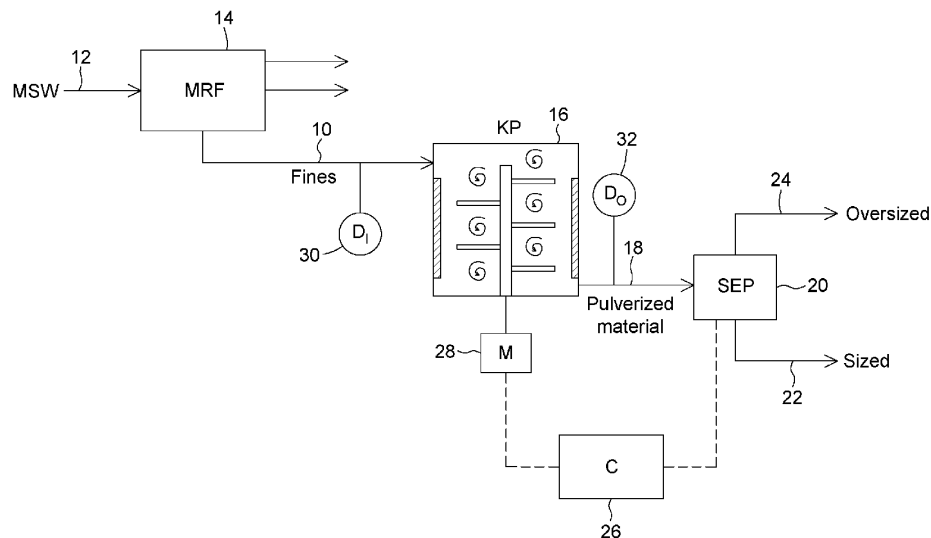


FIG. 1

(57) Abstract: A process for treating a fines stream in a material recover facility (MRF), comprising: providing an MRF fines stream comprising breakable material and ductile material; subjecting the MRF fines streams to a one-pass kinetic pulverization stage to produce a pulverized material comprising a size-reduced fraction derived from the breakable material and an oversized fraction derived from the ductile material; withdrawing the pulverized material from the kinetic pulverizer; and subjecting the pulverized material to separation to produce a size-reduced stream and an oversized stream. Also provided is a system comprising a kinetic pulverizer, a pulverizer conveyor and a screen operatively coupled to the pulverizer conveyor to receive a pulverized stream and produce a sized-reduced stream and an oversized stream. The system can also include a magnetic separator and a dust collection system respectively located upstream and downstream of the kinetic pulverizer.

[Continued on next page]

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, IQ, IR, IS, IT, JM, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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).

Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

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