

[No database/cluster active] ..FI

Unknown command or preparation. [More info](#) ERROR(-104000)

[No database/cluster active]

Disconnection from EPOQUE on: 10-07-2018 18:36:04 DISCONNECT(1005)

Session saved. INFO(1006)



New connection on: : 10-07-2018 : 18:40:37 - Last disconnection on: : 10-07-2018 : 18:36:04

V 4.0.0.44358(LP,U,linux) (Rev:43856 2017-04-27 09:03:29 +0200#(D201802)) (RPM D201802)

Welcome to EPOQUE Rebuild under the Production Environment

[No database/cluster active] ..fi EPODOC

 Database: EPODOC

[EPODOC: SS 1] solid and waste and processing

Results in EPODOC 5.750

[SS 2] treating and waste and machine

Results in EPODOC 1.951

[SS 3] 1 and 2

Results in EPODOC 26

[SS 4] ..v

A command starts with 2 dots. [More info](#) ERROR(-104001)

[SS 4] ..v

[EPODOC: SS 4] ..v

[EPODOC: SS 4]



New connection on: : 07-09-2018 : 16:58:02 - Last disconnection on: : 06-09-2018 : 02:12:15

V 4.0.0.44358(LP,U,linux) (Rev:43856 2017-04-27 09:03:29 +0200#(D201802)) (RPM D201802)

Welcome to EPOQUE Rebuild under the Production Environment

[No database/cluster active] ..fi epodoc

 Database: EPODOC

[EPODOC: SS 1] (Apparatus and (multiple soil samples) and rotational)

Results in EPODOC 0

EPODOC: term 'MULTIPLE SOIL SAMPLES' not found in index 'BI'. WARNING(1)

[SS 2] (Apparatus and multiple and soil and samples and rotational)

Results in EPODOC 0

[SS 3] Apparatus and multiple and soil and samples

Results in EPODOC 12

[SS 4] ..vi

Unknown command or preparation. [More info](#) ERROR(-104000)

[SS 4] ..v

[EPODOC: SS 4] ..li



[SS 4]

Disconnection from EPOQUE on: 07-09-2018 17:10:00 DISCONNECT(1005)

Session saved. INFO(1006)



New connection on: : 19-10-2018 : 20:54:50 - Last disconnection on: : 19-10-2018 : 19:49:55

V 4.0.0.44358(LP,U,linux) (Rev:43856 2017-04-27 09:03:29 +0200#(D201802)) (RPM D201802)

Welcome to EPOQUE Rebuild under the Production Environment

[EPODOC: SS 0] ..fi epodoc

 Database: EPODOC

[EPODOC: SS 9] trommel and classifier and waste and rotating

Results in EPODOC 1

[SS 10] ..li



- 1/1 © EPODOC / EPO
- PN

- [ES2298094](#) A1 20080501
- PNFP

- ES2298094 B1 20090216
- PR

- ES20070003128 20071126
- AP

- ES20070003128 20071126
- DT

- I
- CT

- || STSE (A1)
[GB2151947](#) A 19850731 [A] (CHANG BRIAN);
[DE19523705](#) A1 19970102 [A] (SANDAU EMIL [DE]);
[US5437374](#) A 19950801 [A] (BILLS MARLIN D [US], et al);
[JP2004255257](#) A 20040916 [A] (IKAI CHIKASUKE);
[JPS54152271](#) A 19791130 [A] (KOIZUMI KIICHI);
[US2004226867](#) A1 20041118 [A] (TSE STEVEN [CN]);
[EP1577022](#) A2 20050921 [A] (FARWICK ANDREAS [DE]);
[GB2301051](#) A 19961127 [A] (MORE RAYMOND ANTHONY)
- CNOI

- (A1)
[B07B1/22](#) ; [B07B1/42](#) ; [B02C18/06](#)
- PA

- (A1 B1)
JOAR S L [ES]
- TI

- (A1)
Trommel classifier for **rotating** recovery of municipal solid **waste**, has two engines that drive rollers of double or triple tire through bearings, and bearings are mounted with floating system to antivibrant type bobbin mounted to chassis
- AB

- (A1)
The **trommel classifier** has two engines that drive rollers of double or triple tire through bearings. The bearings are mounted with a floating system to antivibrant type bobbin mounted to the chassis. The exterior fairing is coupled with a unit. The fairing has some windows for cleaning and observation, which is provided for the extreme anti-plate driven by the rollers. The engines are mounted about arms reaction in the form of crank, which leads the **trommel** for entry and exit of the product to recycle.

[SS 10] trommel and classifier and waste

Results in EPODOC 17

[SS 11] ..li



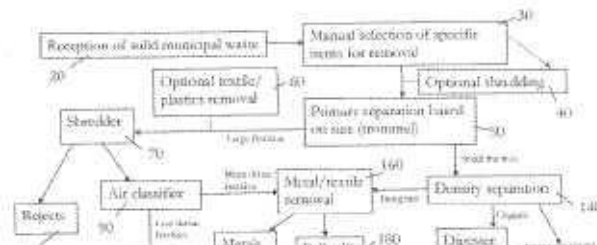
- 1/17 © EPODOC / EPO
- PN

- [GB2540888](#) A 20170201
- PNFP

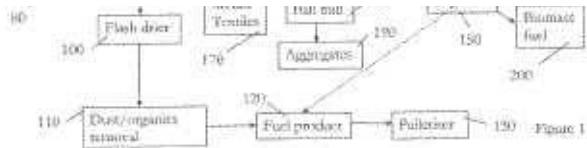
- GB2540888 B 20170531
- PR

- GB20160017312
20100514; GB20100008058
20100514
- AP

- GB20160017312 20100514



DT	- **
CT	- STSE (A B) GB2164331 A 19860319 [] (WOTTON THOMAS RICHARD); EP1990106 A1 20081112 [] (ECO MATERIAL CO LTD [JP], et al); WO9535354 A1 19951228 [] (ECOMAT SA [CH], et al); WO9216686 A1 19921001 [] (ADVANCED RECYCLING TECH [US]); JPH07316572 A 19951205 [] (TAKUMA KK)
CCI	- C10L5/363 ; C10L5/46
CNOI	- (A B) B09B3/00 ; C10L5/40 ; C10L5/46 ; C10L5/48
CCA	- Y02E50/10 ; Y02E50/30
PA	- (A B) BIOCENTRE TECH LTD [GB]
TI	- (A B) Waste processing
AB	- (A) A method of processing waste material to produce a fuel pellet product having a chlorine content less than 0.3%w/w and a biomass content greater than 90%, the method comprises the steps of: receiving waste material 20; manually selecting specific items for removal from the waste 30; mechanically reducing the size of some of the waste 40 preferably where certain items are automatically rejected and preferably using a trommel ; mechanically separating the waste into at least two size fractions preferably using a trommel 50; mechanically reducing the size of some of the waste in one of said at least two size fractions to form floc preferably using a vertical shaft shredder 70; mechanically separating the floc into two density fractions preferably using an air classifier 90; flash drying the lighter of the two said density fractions 100 preferably for approximately 1 second at approximately 400°C; mechanically removing dust 110 and/or any residual organic consent form the flash dried lighter of the two said density



fractions to form a fuel product
 120; removing plastics form
 the **waste** 60 before forming floc
 and/or after separating the floc.
 Preferably the method further
 comprises a step of removing
 textiles 160.

2/17	© EPODOC / EPO	.
PN	- KR20120061126 A 20120613	
PNFP	- KR101240073B B1 20130306	
PR	- KR20100104001 20101025	
AP	- KR20100104001 20101025	
DT	- I	
CNOI	- (A) B07B1/22 ; B07B1/58 ; B07B13/04 ; B07B13/16	
CNOA	- (A) Y02W30/58	
PA	- (A) KOLON GLOBAL CORP [KR]	
TI	- (A B1) Trommel and machine for sorting with the same	
AB	- (A) PURPOSE: A trommel and a waste classifier including the trommel are provided to simultaneously dry and untangle tangled waste containing moisture by forming vortex based on hot wind. CONSTITUTION: A trommel includes protrusions(200) and an air spraying unit. The protrusions are rectangular shaped, lozenge shaped, or triangular shaped. The air spraying unit is embedded at the inner center part of the end part of the trommel screen. The air spraying unit sprays air to the inner part of the trommel screen. The air spraying unit includes a hot wind generator and a hot wind sprayer (100). Hot wind is generated from the hot wind generator and is sprayed to the inner part of the trommel screen. A spraying nozzle(110) is formed at the end part of the hot wind sprayer. A spraying hole is formed at the tip end part of the spraying nozzle. A spiral protrusion is formed at the inner peripheral side of the spraying nozzle.	

3/17	© EPODOC / EPO	.
PN	- KR20120061125 A 20120613	
PR	- KR20100104000 20101025	
AP	- KR20100104000 20101025	
DT	- I	
CNOI	- B07B1/22 ; B07B1/58 ; B07B13/04 ; B07B13/16	
CNOA	- Y02W30/58	
PA	- KOLON GLOBAL CORP [KR]	
TI	- Trommel and machine for sorting with the same	
AB	- PURPOSE: A trommel and a waste classifier containing trommel is provided to efficiently classify waste and to prevent the clogging phenomenon of classifying holes by drying and eliminating waste lump containing moisture. CONSTITUTION: A trommel includes a trommel screen(42) and an air injecting unit. The trommel screen includes a waste inlet and an outlet. A plurality of classifying holes is formed at the circumference of the trommel screen. The trommel screen rotates based on an axial line passing through the center part of the circumference of the trommel screen. The air spraying unit is buried at the inner center part of the end part of the trommel screen. The air spraying unit sprays air to the inner part of the trommel screen. The air spraying unit includes a hot wind generator and a hot wind sprayer. The hot wind sprayer sprays hot wind from the hot wind generator to the inner part of the trommel	

screen.

4/17 © EPODOC / EPO

PN - [KR101053216B](#) B1 20110801

PR - KR20100114680 20101117

AP - KR20100114680 20101117

DT - I

CT - || STSE (B1)
[JP2006315000](#) A 20061124 [] (HOKURIKU SOGO KAIHATSU KK);
[US6024226](#) A 20000215 [] (OLIVIER PAUL A [US])

CNOI - [B03B5/28](#) ; [B03C1/00](#) ; [B09C1/02](#)

PA - MINE RECLAMATION CORP [KR]

TI - PHYSICAL PROCESSING APPARATUS FOR BEING INNOCUOUS **WASTE** TAILING

AB - PURPOSE: A wasted tailing detoxifying physical processing apparatus is provided to prevent environmental contamination by generating recyclable soil based on wasted tailing containing toxic heavy metal. CONSTITUTION: A feeder(2) supplies tailing from a metal mine. A **trommel** screen(4) classifies foreign materials contained in the tailing. A first concentration controller(5) controls the concentration of the tailing. A wet type cyclone(6) classifies the tailing into fine particles and an assembled product and inducts the fine particles to a chemical processing facility or a scrapping facility. A **classifier**(7) classifies the assembled product. A helix gravity **classifier**(8) classifies the assembled product into heavy mineral and light mineral based on weights. A second concentration controller(10) controls the concentration of the mineral liquid of heavy mineral tailing. A magnetic **classifier**(11) classifies magnetic materials from the tailing. A table **classifier**(13) inducts toxic heavy mineral to be scrapped. Other heavy mineral is distributed and dehydrated.

5/17 © EPODOC / EPO

PN - [GB2480318](#) A 20111116

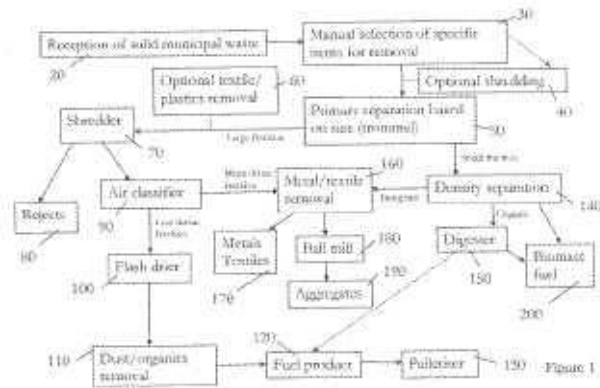
PNFP - GB2480318 B 20170405

PR - GB20100008058 20100514

AP - GB20100008058 20100514

DT - *; Rep

CT - || STSE (A)
[GB2164331](#) A 19860319 [] (WOTTON THOMAS RICHARD);
[EP1990106](#) A1 20081112 [] (ECO MATERIAL CO LTD [JP], et al);
[JPH07316572](#) A 19951205 [] (TAKUMA KK);
[JPS60253712](#) A 19851214 [] (MAGUMA KOGYO KK);
[JP2002210448](#) A 20020730 [] (MIIKE IRON WORKS CO LTD);
[WO9216686](#) A1 19921001 [] (ADVANCED RECYCLING TECH [US]);
[WO9535354](#) A1 19951228 [] (ECOMAT SA [CH], et al)
- || STSE (B)
[GB2164331](#) A 19860319 [] (WOTTON THOMAS RICHARD);
[EP1990106](#) A1 20081112 [] (ECO MATERIAL CO LTD [JP], et al);



	WO9535354 A1 19951228 [] (ECOMAT SA [CH], et al); WO9216686 A1 19921001 [] (ADVANCED RECYCLING TECH [US]); JPS60253712 A 19851214 [] (MAGUMA KOGYO KK); JPH07316572 A 19951205 [] (TAKUMA KK); JP2002210448 A 20020730 [] (MIIKE IRON WORKS CO LTD)
CCI	- C10L5/363 ; C10L5/46
CNOI	- (A B)
	B09B3/00 ; C10L5/46 ; C10L5/48
CCA	- Y02E50/10 ; Y02E50/30
PA	- (A)
	ADVANCED RECYCLING TECH [GB]
	- (B)
	BIOCENTRE TECH LTD [GB]
TI	- (A)
	A method of processing waste to produce a fuel product
	- (B)
	Waste processing
AB	- (A)
	A method of processing waste comprising the steps of receiving the waste 20, sorting the waste 30 to remove specific items and optionally shredding these items 40 before returning these items to the waste , separating the waste into at least two fraction sizes 50 using a trommel wherein the oversized material is passed to shredder 70 to produce small loose particle matter which is separated into two fractions according to density, using an air classifier 90, with the lighter fraction being flash dried 100 to form a fuel product. The fuel product maybe compressed into pellets 130. The flash drying is performed at 400°C with waste being resident in the flash dryer for approximately 1 second. The

6/17 © EPODOC / EPO

PN - [US5197678](#) A 19930330

PR - US19910732062
19910718; US19890376746
19890707; US19900563835
19900803

AP - US19910732062 19910718

DT - *; Rep

CT - || STSE (A)
[US3848813](#) A 19741119 [
] (STANCZYK M, et al);
[US4153207](#) A 19790508 [
] (CERRONI MANLIO);
[US4231526](#) A 19801104 [
] (ORTNER HERBERT, et al);
[US4815668](#) A 19890328 [] (FREI
JOSEF [CH]);
[US4844351](#) A 19890704 [
] (HOLLOWAY CLIFFORD C [US]);
[US4863107](#) A 19890905 [
] (HARZL ERICH [AT], et al);
[US4894148](#) A 19900116 [] (FREI
JOSEF [CH]);
[US5060870](#) A 19911029 [
] (TREZEK GEORGE [US], et al);
[DE3535633](#) A1 19870409 [
] (HEITKAEMPER THEO [DE])

CTNP - [] WTE Corporation,
Confidential progress Report
Amoco McDonald
s Project, Mar. 15, 1988, pp.
1 26

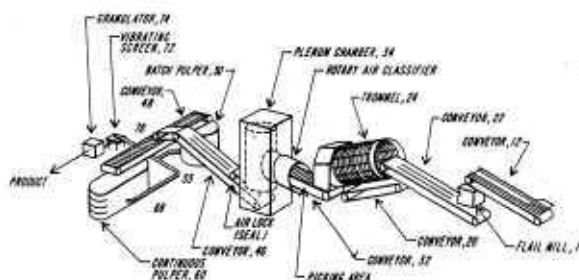
CCI - [B29B13/10](#) ; [B29B17/02](#)

CCA - [B29K2105/065](#) ;
[B29L2031/7158](#) ; [B29K2711/12](#) ;
[B29K2025/00](#) ; [B29K2105/04](#) ;
[B29B2017/0251](#) ; [Y10S241/38](#) ;
[Y02W30/622](#)

PA - WTE CORP [US]

TI - Polystyrene recycling process

AB - This document discloses a process for recycling polystyrene waste. The process involves the following steps: (1) receiving polystyrene waste; (2) shredding the waste into small pieces; (3) separating the pieces into a polystyrene-rich fraction and a polystyrene-poor fraction; (4) melting the polystyrene-rich fraction to form a polystyrene melt; (5) extruding the melt into a filament; (6) cooling the filament to form a polystyrene fiber; (7) winding the fiber into a spool; and (8) recycling the spool into a new product. The process is designed to be efficient and cost-effective, and it can be used to recycle a wide variety of polystyrene waste.



AB

- The invention comprises a method and apparatus for recycling foamed polystyrene from municipal solid **waste** and more particularly, from fast food restaurant **waste**. A steady stream of **waste** is delivered to a flail mill for reducing particle size, a rotary **trommel** for eliminating undersized **waste** and a rotary air **classifier** for removing "heavy" **waste** from the stream. At this point, the **waste** stream comprises mostly paper and foamed polystyrene. The paper and foamed polystyrene are delivered to a water pulper which fiberizes the paper so that it can then be separated from the foamed polystyrene by passing it through a screen of selected mesh size to allow the water and paper pulp to pass through while retaining the foamed polystyrene.

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PN - [US5344025](#) A 19940906

PR - US19910690621 19910424

AP - US19910690621 19910424

DT - *; Rep

CT - || STSE (A)

[US974395](#) A 19101101 [] (KIDDER GEORGE CHANDLER [US]);

[US1312867](#) A 19190812 [];

[US1530277](#) A 19250317 [] (METTLER SR CHRISTOPH);

[US1888372](#) A 19321122 [] (LLOYD BRAMWELL IVOR);

[US1962668](#) A 19340612 [] (OLNEY GEORGE J);

[US2132961](#) A 19381011 [] (MORGAN JOSEPH B);

[US3164548](#) A 19650105 [] (ARCHIBALD ROWELL LORNE, et al);

[US3240335](#) A 19660315 [] (PAUL VANDENHOECK JEAN);

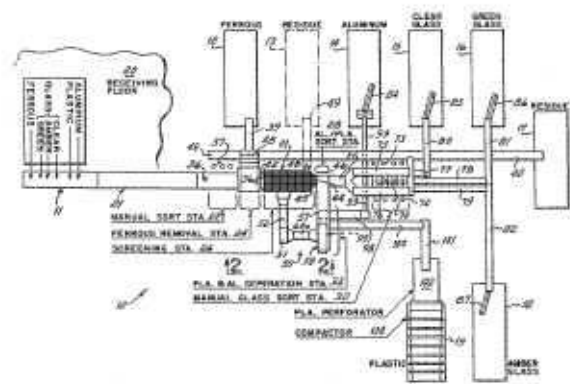
[US3370705](#) A 19680227 [] (GRULKE EMIL G);

[US3409025](#) A 19681105 [] (WALDEMAR WOCHNOWSKI);

[US3608716](#) A 19710928 [] (ROWELL LORNE A, et al);

[US3655043](#) A 19720411 [] (WOCHNOWSKI WALDEMAR, et al);

[US3802558](#) A 19740409 [] (RHYS H);



[US4264352](#) A 19810428 [] (HOUSER JOHN E);
[US4465194](#) A 19840814 [] (COLEMAN G A JOHN [US]);
[US4618415](#) A 19861021 [] (VECCHIO ANTHONY J [US], et al);
[US4755284](#) A 19880705 [] (BROOKS DERRICK W [GB], et al);
[US4831922](#) A 19890523 [] (COGAN KEVIN C [US], et al);
[US4834870](#) A 19890530 [] (OSTERBERG RICHARD R [US], et al);
[US4844351](#) A 19890704 [] (HOLLOWAY CLIFFORD C [US]);
[US4894148](#) A 19900116 [] (FREI JOSEF [CH]);
[US4915824](#) A 19900410 [] (SURTEES GUY F [US]);
[US4929342](#) A 19900529 [] (JOHNSTON GERALD [US]);
[US5009370](#) A 19910423 [] (MACKENZIE HAROLD B [US]);
[US5024335](#) A 19910618 [] (LUNDELL VERNON J [US]);
[US5074992](#) A 19911224 [] (CLINTON L POWELL [US]);
[US5078274](#) A 19920107 [] (BROWN ROBERT A [US]);
[US5116486](#) A 19920526 [] (PEDERSON DENNIS A [US]);
[AU55088](#) A 00000000 [];
[EP0342389](#) A2 19891123 [] (HECHT DIETER);
[DE626782](#) C 19360302 [];
[DE630756](#) C 19360605 [];
[FR828904](#) A 19380603 [];
[NL47566C](#) C 00000000 [];
[GB413294](#) A 19340711 [];
[GB755252](#) A 19560822 [] (MORTIMER NOEL REGINALD FORTESC)

- CCI - [B07B9/00](#) ; [B03B4/065](#) ; [B03B9/06](#)
- CCA - [Y10S209/93](#) ; [Y02W30/526](#) ; [Y02W30/523](#)
- PA - GRIFFIN & CO [US]
- TI - Commingled **waste** separation apparatus and methods
- AB - Separation apparatus and methods separate ferrous, glass, plastic and aluminum articles in kind from each other when all articles are presented in a commingled stream. Ferrous articles are first removed by magnetic apparatus. The

remaining commingled stream of glass, plastic and aluminum articles are conveyed over a vibratory screen for removal or residue materials not first removed prior to ferrous article separation. Plastic and aluminum articles are lifted away from glass articles in a vertically moving air column of a closed loop air flow system. The glass is conveyed past the column for further separation and collection while the plastic and aluminum articles are discharged together from a centrifugal **classif**ier portion of the closed air loop. Large plastic articles are first removed from the combined plastic and aluminum, then aluminum articles are separated from the remaining smaller plastic articles. Aluminum articles are collected while the larger and smaller plastic articles are recombined, compacted and collected. Plastic and aluminum are alternately separated by a **trommel** . Alternative component layouts are disclosed.

8/17 © EPODOC / EPO

PN - [US5091077](#) A 19920225

PR - US19900594053 19901009

AP - US19900594053 19901009

DT - *; Rep

CT - || STSE (A)

[US4139454](#) A 19790213 [] (LARSON ROBERT W);

[US4176055](#) A 19791127 [] (CORRIGAN PATRICK [GB]);

[US4222502](#) A 19800916 [] (GUBITOSE NICHOLAS F, et al);

[US4278532](#) A 19810714 [] (BIRCH PETER R, et al);

[US4549660](#) A 19851029 [] (WERLING KENNETH H [SE]);

[US4553977](#) A 19851119 [] (FRY THOMAS H [US]);

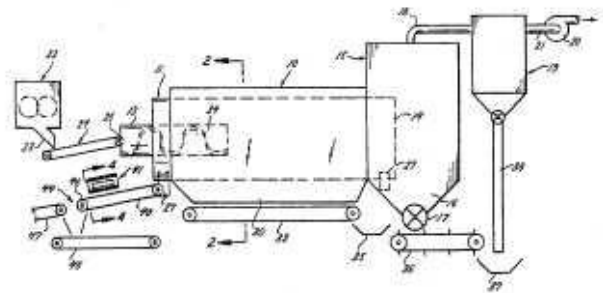
[GB2040735](#) A 19800903 [];

[FR1230809](#) A 19600920 [] (DELFOSSE G);

[JPS54157378](#) A 19791212 [] (WAKABAYASHI IKUZOU, et al);

[CH128383](#) A 19281101 [] (JACQUES ROBERT ANGER [FR])

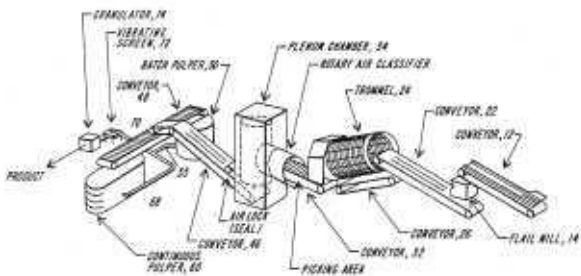
CCI - [B07B4/06](#) ; [B07B9/00](#) ; [B03B9/06](#)



- CCA - [Y10S209/93](#) ; [Y02W30/526](#) ; [Y02W30/525](#)
- PA - WILLIAMS ROBERT M [US]
- TI - **Trommel** material air classifier
- AB - A **waste** material **classifier** apparatus which employs a rotary **trommel** for stirring up the **waste** material in an air stream so that the conglomeration of **waste** is easily sorted into dirt and small particles easily sifted through the **trommel** pores, with air sensitive paper and plastic carried out to a collection zone and large, heavy metallic objects thrust out of the **trommel** and run through both a magnetic separator and an induction conveyor head stock to sort out the metallic trash according to its magnetic and non-magnetic characteristics.

9/17 © EPODOC / EPO

- PN - [US5060870](#) A 19911029
- PR - US19900563835
19900803; US19890376746
19890707
- AP - US19900563835 19900803
- DT - *; Rep
- CT - || STSE (A)
[US3848813](#) A 19741119 [] (STANCZYK M, et al)
[US4153207](#) A 19790508 [] (CERRONI MANLIO)
[US4844351](#) A 19890704 [] (HOLLOWAY CLIFFORD C [US])
[US4894148](#) A 19900116 [] (FREI JOSEF [CH])
[DE3535633](#) A1 19870409 [] (HEITKAEMPER THEO [DE])
- CTNP - || STSE (A)
[] WTE Corporation,
Confidential Progress Report
Amoco
McDonald s Project, Mar. 15,
1988, pp. 1 26
- CCI - [B29B13/10](#) ; [B29B17/02](#)
- CCA - [B29K2105/065](#) ; [B29L2031/7158](#) ; [B29K2711/12](#) ; [B29K2025/00](#) ; [B29K2025/06](#) ; [B29K2105/04](#) ; [B29B2017/0203](#) ; [B29B2017/0251](#) ; [B29K2705/00](#) ; [Y10S209/93](#) ; [Y10S241/38](#) ; [Y02W30/622](#)
- PA - WTE CORP [US]



TI	- Polystyrene recycling process
AB	- The invention comprises a method and apparatus for recycling foamed polystyrene from municipal solid waste and more particularly, from fast food restaurant waste . A steady stream of waste is delivered to a flail mill for reducing particle size, a rotary trommel for eliminating undersized waste and a rotary air classifier for removing "heavy" waste from the stream. At this point, the waste stream comprises mostly paper and foamed polystyrene. The paper and foamed polystyrene are delivered to a water pulper which fiberizes the paper so that it can then be separated from the foamed polystyrene by passing it through a screen of selected mesh size to allow the water and paper pulp to pass through while retaining the foamed polystyrene.

10/17	© EPODOC / EPO	.
PN	- WO9100795 A2 19910124	
PNFP	- WO9100795 A3 19920514	
PR	- US19890376746 19890707	
AP	- WO1990US03646 19900626	
DT	- *; Rep	
CT	- US ISR (A3) US4153207 A [X]; US3848813 A [Y]; US4815668 A [Y]	
CCI	- B29B13/10 ; B29B17/02	
CCA	- B29K2711/12 ; B29K2025/00 ; B29B2017/0251 ; Y02W30/622	
PA	- (A2 A3) WTE CORP [US]	
TI	- (A2 A3) POLYSTYRENE RECYCLING PROCESS	
AB	- (A2) The invention comprises a method and apparatus for recycling foamed polystyrene from municipal solid waste and more particularly from fast food restaurant waste . A steady stream of waste is delivered to a flail mill for reducing particle size, a rotary trommel for eliminating undersized waste and a rotary air classifier for removing "heavy" waste from the stream. At this point, the waste stream comprises mostly paper and foamed polystyrene. The paper and foamed polystyrene are delivered to a water pulper which fiberizes the paper so that it can then be separated from the foamed polystyrene by passing it through a screen of selected mesh size to allow the water and paper pulp to pass through while retaining the foamed polystyrene.	

11/17	© EPODOC / EPO	.
PN	- JP2008080329 A 20080410	
PNFP	- JP4903653B B2 20120328	

PR - JP20060232385 20060829; JP20070221202 20070828

AP - JP20070221202 20070828

DT - I

CT - || STSE (A)
[JP2006043532](#) A 20060216 [] (MITSUBISHI MATERIALS CORP, et al);
[JPH06107415](#) A 19940419 [] (TSUKISHIMA KIKAI CO)

CCA - [Y02W30/526](#) ; [Y02W30/78](#) ; [Y02W30/622](#) ; [Y02W30/524](#) ; [Y02W30/523](#)

FI - B03B5/00&Z; B03B5/28&B; B03B5/28&Z; B03B7/00+ZAB; B03B9/06; B03C1/00&B;
B03C1/02&A; B03C1/02&Z; B09B3/00&Z; B09B5/00&F; C02F1/50&510E;
C02F1/50&520J; C02F1/50&531R; C02F1/50&540A; C02F1/50&560Z; C02F1/78;
C02F11/12&A; C02F11/12&C

FT - 4D004/AA31; 4D004/AC05; 4D004/BA02; 4D004/BA05; 4D004/CA04; 4D004/CA09;
4D004/CA10; 4D004/CA13; 4D004/CA42; 4D004/CB13; 4D004/CB44; 4D050/AA08;
4D050/AB06; 4D050/BB02; 4D050/CA15; 4D050/CA16; 4D059/AA09; 4D059/BD01;
4D059/BE16; 4D059/CA21; 4D059/CA27; 4D071/AA06; 4D071/AA41; 4D071/AA53;
4D071/AB23; 4D071/AB25; 4D071/CA01; 4D071/CA03; 4D071/CA05; 4D071/DA15

PA - (A)
YAMAZAKI JARI SHOTEN KK

TI - (A)
MATERIAL RECOVERY SYSTEM AND MATERIAL RECOVERY METHOD

AB - (A)
PROBLEM TO BE SOLVED: To provide a means capable of separating and recovering recyclable materials from **waste** containing sand and soil in pure conditions as much as possible.
- (A)
SOLUTION: The **waste** in a material hopper 1 is sent to a wet **trommel** 2 using water, and watery muddy substances containing mud, fibrous materials, and large-sized solid pieces are sieved out by the device. The solid pieces are separated by the material with a magnetic selector 8 and a separator 9; each separated material, for example, iron material, wood, stone or debris, plastics, glasses and the like is recycled. The water muddy substances are classified into sand and muddy water with a wet **classifier** 3; the sand is, for example, recycled as a construction material and the like. In addition, fibrous materials and dried muddy lumps are produced from the muddy water with a screen 4, a thickener 5, and a dehydrating dryer 6. The dried mud lumps are, for example, recycled as aggregates.
- (A)
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PN - [JP2004174305](#) A 20040624

PNFP - JP3729805B B2 20051221

PR - JP20020340698 20021125

AP - JP20020340698 20021125

DT - I

CCA - [Y02W10/37](#)

FI - B03B5/00&A; B03B5/00&Z; C02F11/00&B; C02F11/00&A+ZAB; C02F11/00&101Z;
C02F11/14&E; E21D9/06&301U; E21D9/13&C

FT - 2D054/DA33; 4D059/AA09; 4D059/BE16; 4D059/BE31; 4D059/BE55; 4D059/BE56;
4D059/BE61; 4D059/BF15; 4D059/BG00; 4D059/BJ09; 4D059/BJ20; 4D059/BK06;
4D059/BK11; 4D059/BK17; 4D059/CB04; 4D059/CB06; 4D059/CB09; 4D059/CB27;
4D059/CC04; 4D059/DA04; 4D059/DA16; 4D059/DA66; 4D059/DB11; 4D059/EB11;
4D071/AA01; 4D071/AA06; 4D071/AB06; 4D071/AB13; 4D071/AB23; 4D071/AB43;
4D071/AB49; 4D071/CA01; 4D071/CA03; 4D071/CA05; 4D071/DA03; 4D071/DA20

PA - (A)
SANEI KAIHATSU KK

TI - (A)
METHOD AND APPARATUS FOR TREATING INORGANIC SLUDGE

AB - (A)
PROBLEM TO BE SOLVED: To provide an inorganic sludge treatment method which effectively classifies inorganic sludge into a gravel component and a clay or silt component, utilizes the classified gravel component as coarse aggregate and fine aggregate as it is, dehydrates flocs formed by flocculating and sedimenting the clay or silt component and adds a solidifying material to the dehydrated flocs to obtain a building material corresponding to the second-class improved soil and eliminates the production of industrial **waste**, and an inorganic sludge treatment apparatus therefor.

- SOLUTION: In the inorganic sludge treatment method, aggregate is certainly classified using a drum washer, a **trommel** and a **classifier**, and the flocculation of the clay or silt component is accelerated using a PAC (polyaluminum chloride) charging stirring tank provided with a flow blocking plate and an air diffusion pipe while the sedimented and separated flocs are dehydrated. When the solidifying material is added to the dehydrated flocs to solidify the flocs, the addition amount of the solidifying material is adjusted corresponding to the physical properties of a product. The inorganic sludge treatment apparatus is also disclosed.

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PN - [JPH0751698](#) A 19950228

PNFP - JP2898850B B2 19990602

PR - JP19930199445 19930811

AP - JP19930199445 19930811

DT - I

FI - B09B3/00&301E; B09B5/00&F; C02F11/00&C+ZAB; C02F11/12&Z; C02F11/12&Z+ZAB; E02F7/00&D

FT - 4D004/AA32; 4D004/AC05; 4D004/BA02; 4D004/CA03; 4D004/CA12; 4D004/CA13; 4D004/CA15; 4D004/CA35; 4D004/CA40; 4D004/CC03; 4D004/CC11; 4D059/AA09; 4D059/BE02; 4D059/BE16; 4D059/BE31; 4D059/BE46; 4D059/BE55; 4D059/BE56; 4D059/BE61; 4D059/BJ00; 4D059/BK06; 4D059/BK17; 4D059/BK30; 4D059/CA30; 4D059/CB06; 4D059/CC04; 4D059/DA16; 4D059/DA70

PA - (A)
MARUFUKU KENSETSU KK

TI - (A)
TREATMENT OF MUD AND REGENERATED SOIL

AB - (A)
PURPOSE:To effectively recycle mud such as sludge discharged from a building site and surplus soil by mixing a solid clay obtained by removing the gravel and water from a mud with the ballast and sand by agitation to form a regenerated soil. CONSTITUTION: Mud A stored in a hopper 1 is sent to a **trommel** 2 and washed with fresh water, and ballast B having a relatively large grain diameter is separated and removed. The mud is sent to a **classifier** 3 and further washed with water, and sand C having a relatively small diameter is separated and removed. The mud is then received in a **waste** water tank 5, a primary chemical such as poly-aluminum chloride is added to lower the pH, and the mud is sent to a thickener 6 and dehydrated to some extent. The slurried mud having a low content of water is introduced into a slurry tank 7 and pressure-filtered by a filter press 8 into cakey solid clay D. The clay D is mixed with ballast E and sand F and agitated in a mixer 9, and regenerated soil H is formed.

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PN - [JPS62183933](#) A 19870812

PNFP - JPH0569618B B2 19931001

PR - JP19860026178 19860207

AP - JP19860026178 19860207

DT - I

CT - (A)
[JPS4738288](#) A []; [JPS564340](#) A []

FI - B22C1/00&B

FT - 4E092/AA07; 4E092/AA28; 4E092/AA31; 4E092/AA41; 4E092/AA45; 4E092/BA08; 4E092/BA20

PA - (A B2)
YAMAKAWA SANGYO KK

TI - (A)
PRODUCTION OF MOLDING SAND

AB - (A)
PURPOSE:To inexpensively produce molding sand having a low coefft. of thermal expansion by subjecting the sandy slab generated in the smelting and mineral dressing of nickel ore to a frictional crushing treatment to remove the impurities sticking to the surface and to improve the grain size coefft. CONSTITUTION:The nickel slag A which is a raw material is processed with a **trommel** B to remove lumps and is then washed with an Akins classibier C. The raw mateirial is passed through a frictional crushing machine D at a prescribed pulp concn. and is subjected to the frictional crushing treatment, by which the impurities are removed and the grain sizes are improved. A wet type scrubbing frictional crushing machine or the like of a trough type, etc., is suitable as the above-mentioned frictional crushing D. The nickel slag A is made into the grain size having about ≤ 1.4 , more preferably about ≤ 1.3 final grain size coefft. The raw material is then washed with an Akins **classifier** E and is subjected to drying F and sieving G, by which the product molding sand H is obtd. The **waste** water of the Akins **classifier** C, E is treated by a thickener I.

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PN - [JPS56108512](#) A 19810828

PR - JP19800009285 19800131

AP - JP19800009285 19800131

DT - I

CT - || STSE (A)
[JP52055071B](#) B 00000000 []
[JPS5148376B](#) B2 19761220 []

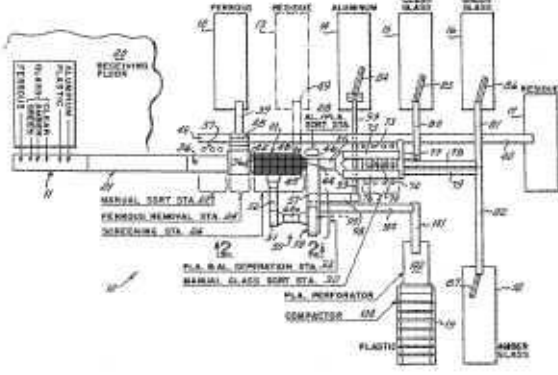
FI - B01D53/34&116; B01D53/34&116A; B01D53/38&100; B01D53/38&110; B07B1/22&Z; B07B11/08

FT - 4D002/AA00; 4D002/AB02; 4D002/BA14; 4D002/DA41; 4D002/EA01; 4D021/AA15; 4D021/AB02; 4D021/CA11; 4D021/DA20; 4D021/EA10; 4D021/FA09; 4D021/FA25; 4D021/FA26; 4D021/GA13; 4D021/GB01; 4D021/HA10; 4D022/AA09; 4D022/AA25; 4D022/AA26; 4D022/BA13; 4D022/BB01; 4D022/CA10

PA - NIPPON KOKAN KK

TI - DEODORIZATION OF **WASTE** GAS FROM AIR **CLASSIFIER**

AB - PURPOSE:To sufficiently deodorize **waste** gas from the classification treatment of wastes by a small-size deodorizer in which **waste** gas from an air **classifier** is used circulatingly but part of the **waste** gas is sent to a deodorizer by a small air blower to deodorize it and then released to the air. CONSTITUTION:Wastes from a conveyer 5 are separated into coarse wastes and fine wastes by a **trommel** 1 and each of the wastes is dropped onto respective conveyers 7 and 8, during which light weight wastes, e.g., paper, etc., are sucked up with air through a suction nozzle 9. The **waste** gas is then separated in a cyclone 10 and then discharged from a rotary valve 17. On the other hand, the **waste** gas from which wastes are removed are sent through a return pipe 13 to the **trommel** 1 by an air blower 11. Part of the **waste** gas of high odorous substance concentrations after the repeated use by circulation is sucked up through a branched pipe 14 by a small air blower 15, deodorized by a deodorizer 16, and then released to the air. Thus, the capacity of the small air blower 15 can be made smaller and the capacity of the deodorizer used can also be made smaller.

16/17	© EPODOC / EPO	
PN	- ES2298094 A1 20080501	
PNFP	- ES2298094 B1 20090216	
PR	- ES20070003128 20071126	
AP	- ES20070003128 20071126	
DT	- I	
CT	- STSE (A1) GB2151947 A 19850731 [A] (CHANG BRIAN); DE19523705 A1 19970102 [A] (SANDAU EMIL [DE]); US5437374 A 19950801 [A] (BILLS MARLIN D [US], et al); JP2004255257 A 20040916 [A] (IKAI CHIKASUKE); JPS54152271 A 19791130 [A] (KOIZUMI KIICHI); US2004226867 A1 20041118 [A] (TSE STEVEN [CN]); EP1577022 A2 20050921 [A] (FARWICK ANDREAS [DE]); GB2301051 A 19961127 [A] (MORE RAYMOND ANTHONY)	
CNOI	- (A1) B07B1/22 ; B07B1/42 ; B02C18/06	
PA	- (A1 B1) JOAR S L [ES]	
TI	- (A1) Trommel classifier for rotating recovery of municipal solid waste , has two engines that drive rollers of double or triple tire through bearings, and bearings are mounted with floating system to antivibrant type bobbin mounted to chassis	
AB	- (A1) The trommel classifier has two engines that drive rollers of double or triple tire through bearings. The bearings are mounted with a floating system to antivibrant type bobbin mounted to the chassis. The exterior fairing is coupled with a unit. The fairing has some windows for cleaning and observation, which is provided for the extreme anti-plate driven by the rollers. The engines are mounted about arms reaction in the form of crank, which leads the trommel for entry and exit of the product to recycle.	
17/17	© EPODOC / EPO	
PN	- CA2066964 A1 19921025	
PR	- US19910690621 19910424	
AP	- CA19922066964 19920423	
DT	- I	
CCI	- B07B9/00 ; B03B4/065 ; B03B9/06	
CCA	- Y10S209/93 ; Y02W30/526 ; Y02W30/523	
PA	- GRIFFIN & CO [US]	
TI	- COMMINGLED WASTE SEPARATION APPARATUS AND METHODS	
AB	- COMMINGLED WASTE SEPARATION APPARATUS AND METHODS Separation apparatus and methods separate ferrous, glass, plastic and aluminum articles in kind from each other when all articles are presented in a commingled stream. Ferrous articles are first removed by magnetic apparatus. The	

remaining commingled stream of glass, plastic and aluminum articles are conveyed over a vibratory screen for removal or residue materials not first removed prior to ferrous article separation. Plastic and aluminum articles are lifted away from glass articles in a vertically moving air column of a closed loop air flow system. The glass is conveyed past the column for further separation and collection while the plastic and aluminum articles are discharged together from a centrifugal **classifier** portion of the closed air loop. Large plastic articles are first removed from the combined plastic and aluminum, then aluminum articles are separated from the remaining smaller plastic articles. Aluminum articles are collected while the larger and smaller plastic articles are recombined, compacted and collected. Plastic and aluminum are alternately separated by a **trommel**. Alternative component layouts are disclosed.