(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
29 September 2005 (29.09.2005)

PCT

(10) International Publication Number
WO 2005/089947 A3

(51) International Patent Classification[7]: B02C 19/06, 23/04, 25/00, F04D 29/28, 29/30, F26B 17/10, B02C 19/18, 23/08

(21) International Application Number:
PCT/ZA2005/000006

(22) International Filing Date: 20 January 2005 (20.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0406494.5 23 March 2004 (23.03.2004) GB

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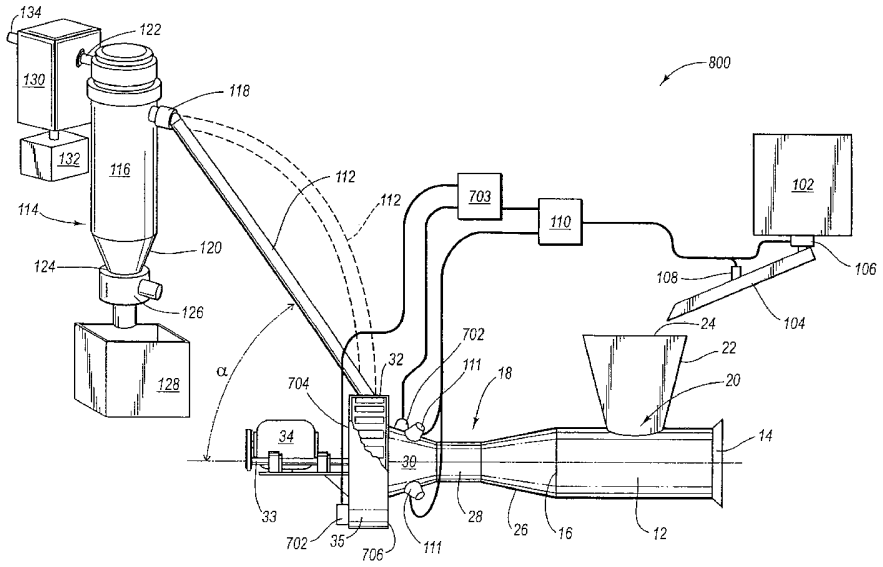
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR PULVERIZING AND EXTRACTING MOISTURE



(57) Abstract: A venturi (18) receives incoming material through an inlet tube (12) and subjects the material to pulverization. The material, as it undergoes pulverization, is further subject to moisture extraction and drying. An airflow generator (32), coupled to the venturi (18), generates a high speed airflow to pull the material through the venturi and into an inlet aperture in the airflow generator. The airflow generator (32) directs the received pulverized material to an outlet where the material may be subsequently separated from the air. An acoustic emission sensor (702) receives the resonant frequencies generated by material passing through the airflow generator. The resonant frequencies reflect a material flow rate that is adjusted to avoid an overload situation. An automatic balancer system (1008) couples to an axle rotating the airflow generator to provide balance, improve efficiency, and eliminate cavitation.

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(88) Date of publication of the international search report:
17 November 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

nternational Application No
PCT/ZA2005/000006

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B02C19/06 B02C23/04 B02C25/00 F04D29/28 F04D29/30
F26B17/10 B02C19/18 B02C23/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B02C G01M G01N F04D F26B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 00/13799 A (GRAHAM, WILLIAM) 16 March 2000 (2000-03-16) the whole document -----	1-3,5,6, 8-16, 19-22
Y	DE 197 47 628 A1 (BAYER AG, 51373 LEVERKUSEN, DE) 6 May 1999 (1999-05-06) abstract; claims; figure 1 -----	1-3,5,6, 8-16, 19-22
Y	WO 01/03840 A (COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION; CAMPBELL) 18 January 2001 (2001-01-18) page 8, line 31 - line 35 abstract; claims; figure 2 ----- -/--	1-3,5,6, 8-16, 19-22

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

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Date of the actual completion of the international search	Date of mailing of the international search report
9 June 2005	07. 10. 2005

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Leitner, J

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 11, 30 September 1999 (1999-09-30) & JP 11 160290 A (HITACHI LTD; HITACHI ENG & SERVICE CO LTD; SHIKOKU ELECTRIC POWER), 18 June 1999 (1999-06-18) abstract	

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X,P	US 2004/251345 A1 (GRAHAM WILLIAM ET AL) 16 December 2004 (2004-12-16) the whole document	1-22

INTERNATIONAL SEARCH REPORT

International application No.
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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-22

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-22

An apparatus and a method for pulverizing material and extracting moisture from material, by providing an airflow generator in communication with a venturi coupled to an inlet tube; the airflow generator generating an airflow through the venturi and towards the airflow generator; introducing the material into the airflow; and passing the material through the venturi to extract moisture and pulverize material and where an acoustic emission sensor receives acoustic emissions indicative for the material passing through the airflow generator.

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2. claims: 23-44

An apparatus and a method for pulverizing material and extracting moisture from material, by providing an airflow generator in communication with a venturi coupled to an inlet tube; the airflow generator generating an airflow through the venturi and towards the airflow generator; introducing the material into the airflow; and where an axle is coupled to the air flow generator and a balancer is coupled to that axle to compensate for imbalance.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
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