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(54) **Apparatus and method for postcombustion of heavy ash with high contents of unburnt matter**

(57) An apparatus and method to promote the completion of the combustion of unburnt matter contained in ash arising from the combustion of solid fuel are described. The apparatus for the postcombustion of ash arising from the combustion of solid fuel comprises a combustion chamber (14) and an extractor (16) arranged so as to receive ash falling from the combustion chamber, the unburnt matter of said ash having to

be burnt, said extractor comprising in turn a metallic belt (18) for ash transportation, said apparatus being characterized in that said conveyor belt is provided with parts or openings for the passage of combustion feeding air, said air thus passing through said ash during at least a part of the forward advancing stretch of said belt.

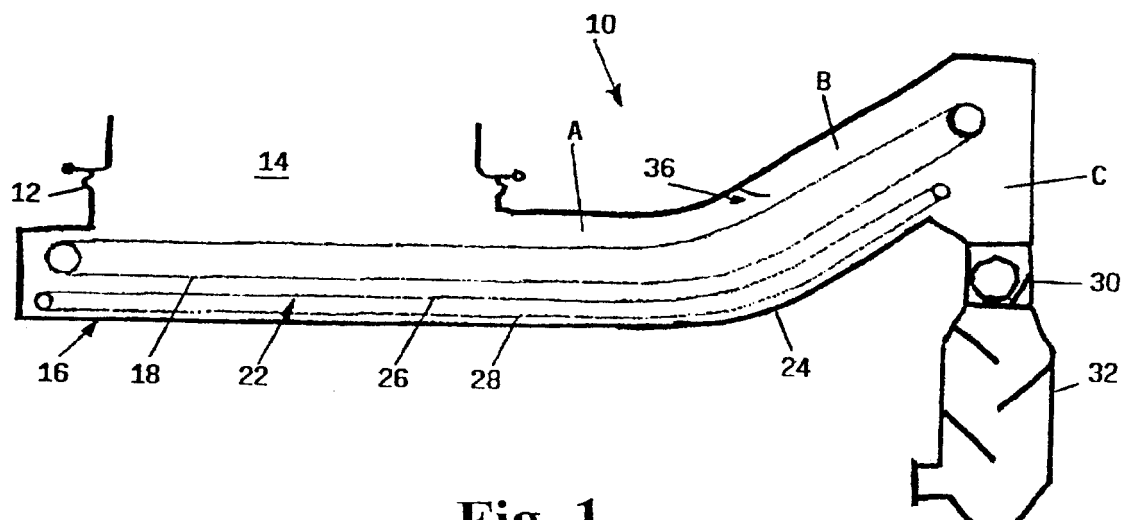


Fig. 1

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EUROPEAN SEARCH REPORT

Application Number
EP 99 20 0062

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Y	WO 96 29546 A (BACHIK ALAN) 26 September 1996 (1996-09-26) * page 5, line 14 - line 29 * * page 10, paragraph 2 * * page 15, paragraph 3 * * page 21, line 28 - page 22, line 7 * * figures 1,2 *	1,2,4,6, 13,17, 18,22	F23J1/00 F23B5/00
D,Y	EP 0 252 967 A (MAGALDI MARIO) 20 January 1988 (1988-01-20) * page 1, column 1, line 3 - line 6 * * page 3, column 3, line 21 - line 27 * * figures 1,2 *	1,2,4,6	
A	---	13	
Y	US 4 723 494 A (KERR CLIFFORD G) 9 February 1988 (1988-02-09) * column 1, line 63 - column 2, line 21 * * column 2, line 39 - line 60 * * column 3, line 12 - line 17 * * column 3, line 43 - line 68 * * figure 1 *	13,17, 18,22	
A	WO 97 00406 A (MAGALDI RICERCH E BREVETTI S ;CARREA ALBERTO (IT); MAGALDI MARIO) 3 January 1997 (1997-01-03) * page 1, line 5 - line 11 * * page 3, line 25 - page 4, line 18 * * page 5, line 10 - line 18 * * page 6, line 1 - line 4 * * page 7, line 11 - line 16 * * figures 2,3,7 *	7,9,10, 16,18	

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The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		30 November 1999	Mougey, M
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EUROPEAN SEARCH REPORT

Application Number
EP 99 20 0062

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	WO 91 13293 A (MAGALDI MARIO) 5 September 1991 (1991-09-05) * page 3, line 10 - page 4, line 1 * * page 4, line 16 - line 22 * * page 5, line 12 - line 17 * ---	12	
A	US 5 216 967 A (MORMINO SAM) 8 June 1993 (1993-06-08) * page 4, line 42 - page 5, line 44 * -----	10	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
Place of search THE HAGUE		Date of completion of the search 30 November 1999	Examiner Mougey, M
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)

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ON EUROPEAN PATENT APPLICATION NO.**

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30-11-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9629546 A	26-09-1996	US 5868084 A	09-02-1999
		AU 5558996 A	08-10-1996
		CA 2215792 A	26-09-1996
		CN 1185827 A	24-06-1998
		EP 0850387 A	01-07-1998
		PL 322334 A	19-01-1998
		US 5749308 A	12-05-1998
		ZA 9602255 A	08-11-1996
EP 0252967 A	20-01-1988	IT 1188247 B	07-01-1988
		AT 45797 T	15-09-1989
		AU 600470 B	16-08-1990
		AU 6890487 A	28-07-1987
		WO 8704231 A	16-07-1987
		IN 165533 A	04-11-1989
		JP 7056375 B	14-06-1995
		JP 63502212 T	25-08-1988
		SU 1625337 A	30-01-1991
		US 4887539 A	19-12-1989
		US RE34814 E	03-01-1995
US 4723494 A	09-02-1988	NONE	
WO 9700406 A	03-01-1997	IT MI951310 A	19-12-1996
		AT 183817 T	15-09-1999
		CA 2224145 A	03-01-1997
		CZ 9704061 A	15-07-1998
		DE 69603965 D	30-09-1999
		EP 0836697 A	22-04-1998
		JP 11508026 T	13-07-1999
		PL 324112 A	11-05-1998
		SK 175597 A	07-10-1998
WO 9113293 A	05-09-1991	IT 1241408 B	14-01-1994
		AT 125613 T	15-08-1995
		AU 651965 B	11-08-1994
		AU 7442291 A	18-09-1991
		CA 2055438 A	03-09-1991
		DE 69111527 D	31-08-1995
		DE 69111527 T	18-01-1996
		DK 471055 T	11-12-1995
		EP 0471055 A	19-02-1992
		ES 2077845 T	01-12-1995
		FI 100614 B	15-01-1998
		GR 3017846 T	31-01-1996
		JP 2604083 B	23-04-1997

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ON EUROPEAN PATENT APPLICATION NO.**

EP 99 20 0062

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

30-11-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9113293 A		JP 4507134 T	10-12-1992
		KR 9711015 B	05-07-1997
		US 5255615 A	26-10-1993

US 5216967 A	08-06-1993	NONE	
