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(54) **Method for maximizing drum rotational speed by continuously monitoring inertia during extraction**

(57) A laundry treating appliance (10) may have a rotatable drum (16) defining a treating chamber (18) for receiving a laundry load, a motor (88) rotatably driving the drum (16), and a controller (96) controlling the operation of the motor (88). The laundry treating appliance (10) may be operated by accelerating the drum (16) with the motor (88) toward a final speed greater than a satellizing speed, determining a mass value indicative of the mass of the rotating drum (16) and contents within the treating chamber (18) during the accelerating, determining a current rotational speed during the acceleration, calculating a force value indicative of a force acting on the drum based on the determined mass value and the current rotational speed, comparing the force value to a reference force value, and repeating the determining, calculating, and comparing during the acceleration, and ceasing the accelerating when the force value obtains a predetermined relationship with the reference force value.

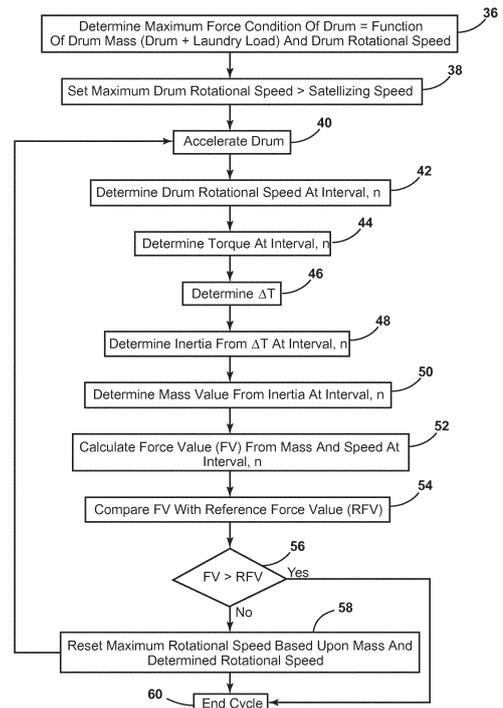


FIG. 6

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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 1 342 826 A1 (PRIMUS N V [BE]) 10 September 2003 (2003-09-10) * paragraph [0019] - paragraph [0090]; figures 1-16 *	1-15	INV. D06F39/00 D06F33/02 D06F37/20
X	DE 44 31 846 A1 (AKO WERKE GMBH & CO [DE]) DIEHL AKO STIFTUNG GMBH & CO [DE]) 14 March 1996 (1996-03-14) * column 1, line 38 - column 5, line 13; figures 1-3 *	1-15	
X	DE 103 05 675 B3 (DIEHL AKO STIFTUNG GMBH & CO [DE]) 27 May 2004 (2004-05-27) * paragraph [0004] - paragraph [0012]; figure 1 *	1-15	
X	US 2005/204482 A1 (MURRAY PETER [GB] ET AL) 22 September 2005 (2005-09-22) * paragraph [0034] - paragraph [0180]; figures 1-16 *	1-15	
A	WO 2005/085511 A1 (ARCELIK AS [TR]; ERENAY KEREM [TR]; BAYKUT ALPER [TR]; TEZDUYAR LATIF) 15 September 2005 (2005-09-15) * paragraph [0044] *	5-7	
A	DE 40 38 178 A1 (TELEFUNKEN ELECTRONIC GMBH [DE] TELEFUNKEN MICROELECTRON [DE]) 4 June 1992 (1992-06-04) * column 1, line 34 - column 5, line 36; figures 1-3 *	1-15	TECHNICAL FIELDS SEARCHED (IPC) D06F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 29 April 2015	Examiner Engelhardt, Helmut
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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ON EUROPEAN PATENT APPLICATION NO.

EP 12 19 7541

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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
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29-04-2015

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1342826	A1	10-09-2003	NONE	

DE 4431846	A1	14-03-1996	DE 4431846 A1	14-03-1996
			FR 2724669 A3	22-03-1996
			IT MI951819 A1	07-03-1996

DE 10305675	B3	27-05-2004	AT 427376 T	15-04-2009
			DE 10305675 B3	27-05-2004
			EP 1447469 A2	18-08-2004
			ES 2321396 T3	05-06-2009
			US 2004154350 A1	12-08-2004

US 2005204482	A1	22-09-2005	CN 101213335 A	02-07-2008
			EP 1888831 A1	20-02-2008
			US 2005204482 A1	22-09-2005
			WO 2006124535 A1	23-11-2006

WO 2005085511	A1	15-09-2005	AT 541076 T	15-01-2012
			EP 1738013 A1	03-01-2007
			TR 200604628 T1	22-01-2007
			WO 2005085511 A1	15-09-2005

DE 4038178	A1	04-06-1992	NONE	

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EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82