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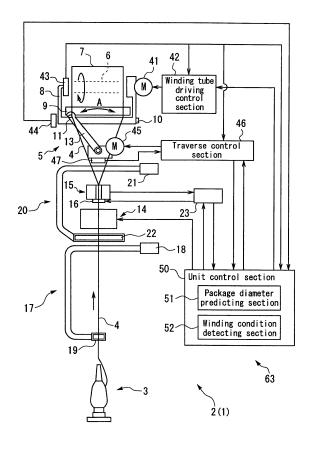
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(54) Yarn winding apparatus

A yarn winding apparatus according to the present invention quickly and accurately detects that an abnormal winding state such as straight winding is occurring on a winding package. A yarn winding unit 2 winds a yarn 4 unwound from a supplying bobbin 3 around a winding tube 6 while traversing the yarn 4 using a traverse device 5, to form a full package 7. A winding state detecting section 52 compares an actual diameter measured by a package diameter sensor 44 with a predicted diameter calculated by a package diameter predicting section 51 to detect the winding state of the winding package 7. The predicted diameter is calculated in accordance with a reference diameter that is the diameter of the winding package 7 measured by the package diameter sensor 44 before the winding state detecting section 52 detects the winding state. At the time of the start of winding, the reference diameter is updated to the actual diameter measured by the package diameter sensor 44.

FIGURE 1



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EUROPEAN SEARCH REPORT

Application Number EP 08 00 9641

	DOCUMENTS CONSIDERE	D TO BE RELEVANT		
Category	Citation of document with indicati of relevant passages	on, where appropriate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A,D	JP 10 072168 A (BEE SH CO) 17 March 1998 (1998 * the whole document * & EP 0 816 277 A2 (SCH [DE]) 7 January 1998 (B-03-17) LAFHORST & CO W	1-8	INV. B65H63/08 B65H54/28
4	EP 0 415 702 A2 (DU PO 6 March 1991 (1991-03- * the whole document * 		1-8	
				TECHNICAL FIELDS SEARCHED (IPC)
	The present search report has been of Place of search	frawn up for all claims Date of completion of the search		Examiner
	The Hague	20 June 2012	Gui	san, Thierry
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