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(54) **Ultrasonic induction apparatus and method.**

(57) Apparatus and method for inducing ultrasonic vibrations for use in an ultrasonic process, illustrated in the form of an ultrasonic cleaning process wherein ultrasonic vibrations are induced in a cleaning fluid (14) in contact with an object (12) to be cleaned for cleaning the object (12) ultrasonically, utilize a sealed chamber (30) within which ultrasonic fluid (32) is confined separate from the cleaning fluid (14) and isolated from the atmosphere, ultrasonic transducers (34) associated with the sealed chamber (30) for inducing ultrasonic vibrations in the ultrasonic fluid (14), and a coupling arrangement by which the vibrating ultrasonic fluid (32) in the chamber (30) is coupled with the cleaning fluid (14) to induce ultrasonic vibrations in the cleaning fluid (14) to accomplish the desired ultrasonic cleaning.

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EUROPEAN SEARCH REPORT

Application Number

EP 90 30 4656

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.5)		
X	EP-A-0 056 827 (JEAN GALLAY S.A.) * page 4, line 16 - page 5, line 9; figure 2 * -- --	1-10, 13-19	G 10 K 11/00 A 47 L 15/02		
X	IBM TECHNICAL DISCLOSURE BULLETIN. vol. 18, no. 10, March 1976, NEW YORK US pages 3263 - 3264; J.A.Morreale: "Plastic Ultrasonic Agitated Process" * the whole document * -- --	1-19			
X	GB-A-1 456 664 (DAWE INSTRUMENTS LIMITED) * page 1, line 64 - page 2, line 20; figure 2 * -- --	1-10, 13-19			
A	US-A-3 946 599 (J.PATT) * column 2, lines 34 - 54; figures 1, 2 * -- -- -- --	13-19			
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)		
			G 10 K B 08 B		
The present search report has been drawn up for all claims					
Place of search The Hague		Date of completion of search 28 June 91	Examiner SWARTJES H.M.		
<table><tr><td>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</td><td>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</td></tr></table>				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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