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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : D06F 43/00, B08B 7/00		A1	(11) International Publication Number: WO 99/35321
			(43) International Publication Date: 15 July 1999 (15.07.99)
(21) International Application Number: PCT/US99/00129		(81) Designated States: CA, IL, KR, MX, SG, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).	
(22) International Filing Date: 6 January 1999 (06.01.99)			
(30) Priority Data: 09/003,913 ✓ 7 January 1998 (07.01.98) ✓ US		Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	
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(54) Title: LIQUID CARBON DIOXIDE CLEANING USING JET EDGE SONIC WHISTLES AT LOW TEMPERATURE

(57) Abstract

A cleaning system (10) and method utilizing sonic whistle agitation to enhance the soil removal and mass transport capacity of the liquid carbon dioxide (20) at low process temperatures. Sonic whistles (61) are within a cleaning chamber (40), and liquid carbon dioxide (20) is forced out of the sonic whistle jets to ultrasonically emulsify and disperse non-miscible liquids or insoluble solids, such as remove low solubility oils and greases, in the liquid carbon dioxide contained in the cleaning chamber. Cleaning is accomplished at temperatures between -68 °F and 88 °F, and the temperature of the liquid carbon dioxide is typically below 32 °F.

