WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7:

B01F 13/00

(11) International Publication Number:

WO 00/39056

A3

(43) International Publication Date:

6 July 2000 (06.07.00)

(21) International Application Number:

PCT/IB99/02100

(22) International Filing Date:

15 December 1999 (15.12.99)

(81) Designated States: AU, CA, CN, JP, KR, MX, SG, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

(30) Priority Data:

09/220,138

US 23 December 1998 (23.12.98)

Published

With international search report.

(71) Applicant (for all designated States except US): B.E.E. INTER-NATIONAL LTD. [IL/IL]; Southern Industrial Area, P.O.

Box 16, 10550 Migdal Ha'emek (IL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SHECHTER, Tal [US/US]; 12 Bayberry Lane, Randolph, MA 02368 (US). LEVIN, Assaf [-/IL]; Haba'al Shem Tov Street 60, Kiryat-Ata (IL). AISH, Yehuda [-/IL]; Hatzivoni Street 15, Kiryat-Tivon (IL).

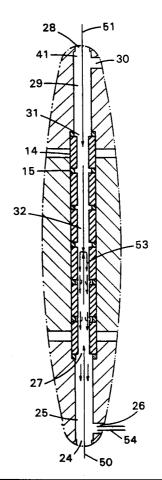
(74) Agent: FEIGENBAUM, David, L.; Fish & Richardson, P.C., 225 Franklin Street, Boston, MA 02110-2804 (US).

(88) Date of publication of the international search report: 19 October 2000 (19.10.00)

(54) Title: PROCESSING PRODUCT COMPONENTS BY FLUID JET INTERACTION

(57) Abstract

A method and apparatus for processing product components, in particular the emulsification of oil in water. The method includes directing a first jet (50) of fluid along a first path and directing a second jet (51) of fluid along a second path to cause interaction between the jets that forms a stream (53) that is oriented essentially opposite to one of the jet paths.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
ΑZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav	TM	Turkmenistan
BF	Burkina Faso	GR	Greece		Republic of Macedonia	TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	$\mathbf{z}\mathbf{w}$	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's	NZ	New Zealand		
CM	Cameroon		Republic of Korea	PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

INTERNATIONAL SEARCH REPORT

International application No. PCT/IB99/02100

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) :BO1F 13/00 US CL :366/162.4								
According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED								
Minimum documentation searched (classification system followed by classification symbols)								
U.S. : 366/162.4, 167.1, 176.1, 181.5, 159.1, 162.5, 173.1, 173.2, 174.1, 175.2, 176.2, 336, 340; 422/133, 135								
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched								
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)								
C. DOCUMENTS CONSIDERED TO BE RELEVANT								
Category*	Citation of document, with indication, where ap	Relevant to claim No.						
X US	S 4,087,862 A (TSIEN) 02 MAY 19	25-35						
	5 5,176,448 A (KING et al) 05	1-10, 21-35						
Y	cument.	 11-19, 20						
	5 1,496,345 A (LICHTENTHAELE	1-35						
uot	cument							
Further doc	cuments are listed in the continuation of Box C	. See patent family annex.						
•	tegories of cited documents:	"T" later document published after the inte date and not in conflict with the applica						
	defining the general state of the art which is not considered articular relevance	principle or theory underlying the inve						
	cument published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step						
cited to es	which may throw doubts on priority claim(s) or which is stablish the publication date of another citation or other uson (as specified)	"Y" document of particular relevance; the	claimed invention cannot be					
•	referring to an oral disclosure, use, exhibition or other means	considered to involve an inventive step when the document is combined with one or more other such documents, such combination						
"P" document the priority	published prior to the international filing date but later than y date claimed	being obvious to a person skilled in the art "&" document member of the same patent family						
Date of the actual	completion of the international search	Date of mailing of the international search report						
19 JUNE 2000		06 JUL 2	2000					
	g address of the ISA/US Patents and Trademarks	Authorized officer DEBORAH THOMAS						
Box PCT Washington, D.C.		TONY SOOHOO PARALEGAL SPECIALIST						
. -	(703) 305-3230	Telephone No. (703) 308-0661	·					