Paper No. _____ Filed: August 23, 2019

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNITED LABORATORIES INTERNATIONAL, LLC, Petitioner,

v.

REFINED TECHNOLOGIES, INC., Patent Owner.

Patent No. 9,017,488

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 9,017,488

DOCKET A L A R M Find authenticated court documents without watermarks at <u>docketalarm.com</u>.

TABLE OF CONTENTS

TABI	TABLE OF EXHIBITS				
I.	INTRODUCTION				
II.	MANDATORY NOTICES (37 C.F.R. § 42.8)				
	A.	Real Parties-in-Interest (37 C.F.R. § 42.8(b)(1))	8		
	B.	Related Matters (37 C.F.R. § 42.8(b)(2))	8		
	C.	Lead and Back-Up Counsel (37 C.F.R. § 42.8(b)(3))	8		
	D.	Service Information (37 C.F.R. § 42.8(b)(4))	8		
III.	PAYMENT OF FEES (37 C.F.R. §§ 42.15(a) AND 42.103)				
IV.	GROUNDS FOR STANDING (37 C.F.R. § 42.104(a))				
V.	STATEMENT OF PRECISE RELIEF REQUESTED FOR EACH CHALLENGED CLAIM				
VI.	SUMMARY OF THE '488 PATENT				
VII.	LEVEL OF ORDINARY SKILL IN THE ART				
VIII.	CLAIM CONSTRUCTION				
	A.	"Contaminant"	14		
	B.	"Process System"	15		
	C.	"Carrier Gas"	15		
	D.	"Non-Aqueous Solvent"	16		
	E.	"Pressure Vessel"	_16		

 \mathbf{r}

	F.			circuit used in a refining hydrotreating d associated equipment"	17
	G.	"vol	latizing	,, 	18
	H.	"dry	y gas" a	and "purchase fuel gas"	18
	I.	"Sul	bstanti	al"	19
IX.	OVE	RVIEW	OF TH	e Prior Art	_19
X.	Deta	AILED	Expla	NATION OF GROUNDS FOR UNPATENTABILITY	21
	A.			Claims 1-6 and 9-13 are obvious under § 103 over Foutsitzis and Allen	21
		1.	Inde	pendent Claim 1	21
			a.	Preamble: "A method for removing a contaminant from a process system, comprising the steps of:"	21
			b.	Element 1.1: "(i) providing a water-free carrier gas source;"	22
			c.	Element 1.2: "(ii) providing a non-aqueous solvent source;"	23
			d.	Element 1.3: "(iii) volatizing non-aqueous solvent from the non-aqueous solvent source in water-free carrier gas from the carrier gas source and deliver the carrier gas containing the volatized non-aqueous solvent to the process system; and"	e ing
			e.	Element 1.4: "(iv) removing said contaminant out of said system, wherein substantial amount of said contaminant is dissolved in said solvent in a vapor or liquid state as it is being removed from said system,"	26

2

2.	Depe	endent Claims 2-6 and 9-13	27
	a.	Claim 2: "The method of claim 1, wherein the process system is selected from the group consisting of a reactor, an absorbent chamber containing a molecular sieve, and a pressure vessel."	_27
	b.	Claim 3: "The method of claim 1, wherein the process system comprises a reactor circuit used in a refining hydrotreating process and associated equipment."	_29
	c.	Claim 4: "The method of claim 1 wherein the carrier gas is at least one member selected from the group consisting of inert gas, purchase fuel gas and hydrogen."	, _30
	d.	Claim 5: "The method of claim 1 wherein the carrier gas is at least one dry gas with the chemical formula C_nH_{2n+2} , wherein n is an integer greater the 0 but less than 6."	an
	e.	Claim 6: "The method of claim 1 wherein the carrier gas is hydrogen."	32
	f.	Claim 9: "The method of claim 1, wherein the carrier gas containing the volatized solvent is circulated through the system using a compressor."	32
	g.	Claim 10: "The method of claim 1, wherein the temperature of the equipment in the system is adjusted to a range between 225 F and 400 F prior to introduction of the solvent."	_34
	h.	Claim 11: "The method of claim 1 wherein the solvent is introduced into the carrier gas by connecting the gas and solvent sources."	<u>34</u>

		i. Claim 12: "The method of claim 1 wherein the solvent is a non-polar organic solvent."	_36
		j. Claim 13: "The method of claim 1 wherein the solvent is a C1-C50 hydrocarbon."	_36
В.	obvic	nd 2: Dependent Claims 7-8 and 14-20 are rendered ous under 35 U.S.C. § 103 by Foutsitzis in view of n, and further in view of Jansen	<u>.</u> 37
	1.	Claim 7: "The method of claim 6 wherein said organic contaminant comprises at least one member selected from the group consisting of crude oil and its derivatives, hydrocarbons and noxious gases."	_38
	2.	Claim 8: "The method of claim 6, wherein said organic contaminant is a noxious gas, said noxious gas being at least one member selected from the group consisting of hydrogen sulfide, benzene, carbon monoxide, and a light end hydrocarbon, said light end hydrocarbon being capable of resulting in a positive reading when tested for the Lower Explosive Limit (or "LEL")."	_40
	3.	Claim 14: "The method of claim 1 wherein the solvent comprises at least one member selected from the group consisting of aliphatic, paraffinic, isoparaffinic, aromatic, naphthenic, olefinic, diene, terpene, polymeric or halogenated hydrocarbon, and wherein the solvent is a naturally occurring, synthetic or processed organic solvent."	_41
	4.	Claim 15: "The method of claim 14 wherein the solvent is a natural terpene or its hydrogenated derivatives."	42
	5.	Claim 16: "The method of claim 1 wherein the solvent is a processed solvent selected from the group consisting of an aromatic solvent, virgin naphtha,	

DOCKET A L A R M



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.