

tetrafluoroethane to the pentafluoroethane being selected such that the blend exhibits a dew point at about -32°F or a bubble point at about -41.5°F at about one standard atmosphere of pressure, wherein in the substitute refrigerant said pentafluoroethane is present in an amount of 59% to 57% by weight and said tetrafluoroethane is present in an amount of 41% to 43% by weight of the combined weight of the pentafluoroethane and tetrafluoroethane on the basis of the combined weights of said pentafluoroethane and said tetrafluoroethane totaling 100%, and wherein the tetrafluoroethane is 1,1,1,2- tetrafluoroethane.

64. (New) The refrigerant composition of claim 63, wherein the blend exhibits a dew point of -32°F.

65. (New) The refrigerant composition of claim 63, wherein the blend exhibits a dew point at about -32°F and a bubble point at about -41.5°F at about one standard atmosphere of pressure.

66. (New) The method of claim 59, wherein the blend exhibits a glide at about 9.5°F.

67. (New) The refrigerant composition according to claim 63, wherein said pentafluoroethane is present in the ratio of about 58% by weight to said tetrafluoroethane present in an amount of about 42% by weight.

68. (New) In the apparatus of claim 53, wherein the apparatus is selected from the group consisting of refrigeration equipment, air-conditioning equipment, and HVAC equipment.

69. (New) The method according to claim 58, wherein the apparatus is selected from the group consisting of refrigeration equipment, air-conditioning equipment, and HVAC equipment.

REMARKS

The Office Action presents two issues, namely: 1) an objection to claims 30-40 and 47-49; and 2) a non-statutory double patenting rejection based on US 8,197,706. Applicants thank the Examiner for the indication at page 4 that the claims would be allowable if the objection and double patenting rejection were overcome.

Claims 30-49 are pending. Claims 30, 32, 34 and 44-46 are amended herein. Claims 41-43 are cancelled. New claims 50-69 are presented. Upon entry of the present amendments, claims 30-40 and 44-69 would remain.

First, Applicants thank the Examiner for the indication of allowability of the claims 30-49, if the objection and the double patenting rejection were overcome.

In response to the objection, Applicants note the Examiner's comment at page 2 that: "there is no evidence of record that compositions containing 1,1,2,2-tetrafluoroethane can meet the physical limitations. Appropriate correction is required." In view of this kind suggestion, Applicants have amended herein claims 30, 32 and 34 to specify that the tetrafluoroethane is 1,1,1,2- tetrafluoroethane. Applicants submit that this amendment thereby traverses the objection.

In response to the double patenting rejection, Applicants submit herewith a Terminal Disclaimer referencing the US Patent 8,197,706 identified as the subject of the rejection. Applicants submit that this Terminal Disclaimer traverses this rejection.

Since these are the only two issues identified in connection with claims 30-49, Applicants submit that these claims are now in condition for allowance. In view of the amendment of claims 30, 32 and 34, Applicants have canceled claims 40-43 that specified that the tetrafluoroethane is 1,1,1,2-tetrafluoroethane. Applicants have also amended claims 44-46 to correct their dependency in view of the cancellation of claims 41-43.

New claims 50-69 are added. Claims 50-52 depend upon claims 30, 32, and 34, respectively, specifying wherein the blend exhibits a dew point of -32°F. Applicants submit claims 50-52 are allowable in view of the amendments to their base independent claims rendering their

base independent claims allowable. New independent claims 53, 58 and 63 are presented which are patterned after independent claims 30, 32 and 34 respectively specifying that the tetrafluoroethane is 1,1,1,2-tetrafluoroethane but removing from the claim that the refrigerant composition further comprises non-refrigerant gas components, said non-refrigerant gas components including a lubricating oil. The remaining new claims 54-57, 59-62 and 64-69 are dependent upon new independent claims 53, 58 and 63, respectively. Applicants submit that these claims 53-69 are allowable for the same reasons as independent claims 30, 32 and 34 in that the specification that the tetrafluoroethane is 1,1,1,2-tetrafluoroethane appears to be the feature important in the Office Action to render the claims patentable in view of the evidence previously presented.

CONCLUSION

In light of the foregoing remarks and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed and that all pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephone conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

THOMAS | HORSTEMEYER, LLP

By: /Todd Deveau/

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Electronic Patent Application Fee Transmittal

Application Number:	13493491			
Filing Date:	11-Jun-2012			
Title of Invention:	REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT OF R22 REFRIGERANT			
First Named Inventor/Applicant Name:	Kenneth M. Ponder			
Filer:	Todd Deveau.			
Attorney Docket Number:	821920-1032			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	2202	7	50	350
INDEPENDENT CLAIMS IN EXCESS OF 3	2201	3	230	690
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1040

Electronic Acknowledgement Receipt

EFS ID:	31991502
Application Number:	13493491
International Application Number:	
Confirmation Number:	1039
Title of Invention:	REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT OF R22 REFRIGERANT
First Named Inventor/Applicant Name:	Kenneth M. Ponder
Customer Number:	24504
Filer:	Todd Deveau.
Filer Authorized By:	
Attorney Docket Number:	821920-1032
Receipt Date:	08-MAR-2018
Filing Date:	11-JUN-2012
Time Stamp:	09:26:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 1040
RAM confirmation Number	030818INTEFSW09271200
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment/Req. Reconsideration-After Non-Final Reject	Response_to_Non-final_OA.pdf	122515	no	11
			5e449f297cd6aae2292c5936479ff45e7fa713c2		

Warnings:**Information:**

2	Fee Worksheet (SB06)	fee-info.pdf	31993	no	2
			9a63feed1b693bcf3babbd45eab223bfc8e887b73		

Warnings:**Information:**

Total Files Size (in bytes):			154508
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed		PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce
Electronic Petition Request	TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	
Application Number	13493491	
Filing Date	11-Jun-2012	
First Named Inventor	Kenneth Ponder	
Attorney Docket Number	821920-1032	
Title of Invention	REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT OF R22 REFRIGERANT	
☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action ☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.		
Owner	Percent Interest	
Stefko Properties LLC	100 %	
The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s) 8197706 as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns. In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later: - expires for failure to pay a maintenance fee; - is held unenforceable; - is found invalid by a court of competent jurisdiction; - is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321; - has all claims canceled by a reexamination certificate; - is reissued; or - is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer. ☒ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.		

☐ I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.	
Applicant claims the following fee status: ☒ Small Entity ☐ Micro Entity ☐ Regular Undiscounted	
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.	
THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES I certify, in accordance with 37 CFR 1.4(d)(4) that I am: ☒ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application Registration Number <u>29526</u> ☐ A sole inventor ☐ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application ☐ A joint inventor; all of whom are signing this request	
Signature	/Todd Deveau/
Name	Todd Deveau

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
 Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal				
Application Number:		13493491		
Filing Date:		11-Jun-2012		
Title of Invention:		REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT OF R22 REFRIGERANT		
First Named Inventor/Applicant Name:		Kenneth M. Ponder		
Filer:		Todd Deveau.		
Attorney Docket Number:		821920-1032		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	2814	1	160	160
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				160

Doc Code: DISQ.E.FILE

Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 13493491

Filing Date: 11-Jun-2012

Applicant/Patent under Reexamination: Ponder

Electronic Terminal Disclaimer filed on March 8, 2018

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt

EFS ID:	31991796
Application Number:	13493491
International Application Number:	
Confirmation Number:	1039
Title of Invention:	REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT OF R22 REFRIGERANT
First Named Inventor/Applicant Name:	Kenneth M. Ponder
Customer Number:	24504
Filer:	Todd Deveau.
Filer Authorized By:	
Attorney Docket Number:	821920-1032
Receipt Date:	08-MAR-2018
Filing Date:	11-JUN-2012
Time Stamp:	10:01:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 160
RAM confirmation Number	030818INTEFSW10010700
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	33519	no	2
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Warnings:**Information:**

2	Fee Worksheet (SB06)	fee-info.pdf	30429	no	2
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Warnings:**Information:**

Total Files Size (in bytes):			63948
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/493,491	Filing Date 06/11/2012	☒ To be Mailed
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ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

(Column 1) (Column 2)

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

(Column 1) (Column 2) (Column 3)

AMENDMENT	03/08/2018	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 37	Minus	** 20	= 17	X \$50 =	850
	Independent (37 CFR 1.16(h))	* 6	Minus	***3	= 3	X \$230 =	690
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
TOTAL ADD'L FEE						1540	

(Column 1) (Column 2) (Column 3)

AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
TOTAL ADD'L FEE							

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

SLIE
TONYA MCBRIDE

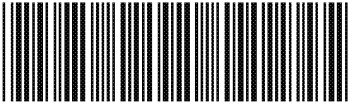
This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Document code: WFEE

United States Patent and Trademark Office
Sales Receipt for Accounting Date: 04/18/2018

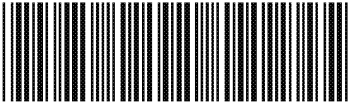
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Issue Classification 	Application/Control No. 13/493,491	Applicant(s)/Patent Under Reexamination Ponder et al.	
	Examiner JOHN R HARDEE	Art Unit 1761	

CPC						
Symbol					Type	Version
C09K	/	5	/	045	F	2013-01-01
C10M	/	171	/	008	I	2013-01-01
C09K	/	2205	/	22	A	2013-01-01
C09K	/	2205	/	43	A	2013-01-01
C10M	/	2203	/	1065	A	2013-01-01
C10M	/	2223	/	041	A	2013-01-01
C10N	/	2220	/	302	A	2013-01-01
F25B	/	2400	/	18	A	2013-01-01

CPC Combination Sets							
Symbol				Type	Set	Ranking	Version
	/		/				

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	37	
/JOHN R HARDEE/ Primary Examiner, Art Unit 1761	30 March 2018	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

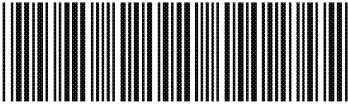
Issue Classification 	Application/Control No. 13/493,491	Applicant(s)/Patent Under Reexamination Ponder et al.
	Examiner JOHN R HARDEE	Art Unit 1761

INTERNATIONAL CLASSIFICATION			
CLAIMED			
C09K	/	5	/ 04
NON-CLAIMED			
/		/	

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	37	
/JOHN R HARDEE/ Primary Examiner, Art Unit 1761	30 March 2018	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification 	Application/Control No. 13/493,491	Applicant(s)/Patent Under Reexamination Ponder et al.
	Examiner JOHN R HARDEE	Art Unit 1761

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	30	10	39	13	48	25	57	34	66						
2	31	11	40	19	49	26	58	35	67						
8	32	-	41	7	50	27	59	36	68						
9	33	-	42	14	51	28	60	37	69						
15	34	-	43	20	52	29	61								
16	35	5	44	21	53	30	62								
17	36	12	45	22	54	31	63								
3	37	18	46	23	55	32	64								
4	38	6	47	24	56	33	65								

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 37	
/JOHN R HARDEE/ Primary Examiner, Art Unit 1761 (Primary Examiner) _____ (Date) 30 March 2018		O.G. Print Claim(s) 1	O.G. Print Figure 1

Bibliographic Data

Application No: 13493491

Foreign Priority claimed:

☐ Yes ☒ No

35 USC 119 (a-d) conditions met:

☐ Yes ☒ No

☐ Met After Allowance

Verified and Acknowledged:

/jrh/

Examiner's Signature

Initials

Title:

REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT
OF R22 REFRIGERANT

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
06/11/2012	252	1761	821920-1032
RULE			

APPLICANTS

INVENTORS

Kenneth M. Ponder, Cumming, GA, UNITED STATES

Steffan Thomas, Buckhead, GA, UNITED STATES

CONTINUING DATA

This application is a CON of 12961045 12/06/2010 PAT 8197706

12961045 is a CON of 10937736 09/08/2004

10937736 has PRO of 60501049 09/08/2003

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

06/19/2012

STATE OR COUNTRY

UNITED STATES

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ATLANTA, GA 30339

UNITED STATES

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\$530



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NOTICE OF ALLOWANCE AND FEE(S) DUE

24504 7590 04/05/2018
THOMAS | HORSTEMEYER, LLP
3200 WINDY HILL ROAD, SE
SUITE 1600E
ATLANTA, GEORGIA 30339
UNITED STATES OF AMERICA

EXAMINER	
HARDEE, JOHN R	
ART UNIT	PAPER NUMBER

1761

DATE MAILED: 04/05/2018

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/493,491	06/11/2012	Kenneth M. Ponder	821920-1032	1039

TITLE OF INVENTION: REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT OF R22 REFRIGERANT

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
REGULAR	SMALL	\$500	\$0.00	\$0.00	\$500	07/05/2018

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or **Fax** (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

24504 7590 04/05/2018
THOMAS | HORSTEMEYER, LLP
3200 WINDY HILL ROAD, SE
SUITE 1600E
ATLANTA, GEORGIA 30339
UNITED STATES OF AMERICA

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/493,491	06/11/2012	Kenneth M. Ponder	821920-1032	1039

TITLE OF INVENTION: REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT OF R22 REFRIGERANT

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
REGULAR	SMALL	\$500	\$0.00	\$0.00	\$500	07/05/2018

EXAMINER	ART UNIT	CLASS-SUBCLASS
HARDEE, JOHN R	1761	252-067000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

☐ Issue Fee

☐ Publication Fee (No small entity discount permitted)

☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)

☐ A check is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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13/493,491

06/11/2012

Kenneth M. Ponder

821920-1032

1039

24504

7590

04/05/2018

THOMAS | HORSTEMEYER, LLP
3200 WINDY HILL ROAD, SE
SUITE 1600E
ATLANTA, GEORGIA 30339
UNITED STATES OF AMERICA

EXAMINER

HARDEE, JOHN R

ART UNIT

PAPER NUMBER

1761

DATE MAILED: 04/05/2018

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b) (2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 13/493,491	Applicant(s) Ponder et al.	
	Examiner JOHN R HARDEE	Art Unit 1761	AIA Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicant's TD and amendments.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 30-40 and 44-69. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some *c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

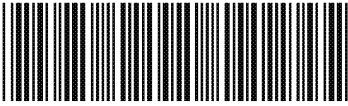
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892) 2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____. 3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____. 4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.	5. ☐ Examiner's Amendment/Comment 6. ☐ Examiner's Statement of Reasons for Allowance 7. ☐ Other _____.
---	---

/JOHN R HARDEE/ Primary Examiner, Art Unit 1761	
--	--

<i>Search Notes</i> 	Application/Control No. 13/493,491	Applicant(s)/Patent Under Reexamination Ponder et al.
	Examiner JOHN R HARDEE	Art Unit 1761

CPC - Searched*		
Symbol	Date	Examiner
C09K5/045; 2205/22; 2205/43	03/30/2018	JRH

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
PALM invetor search. Reviewed prosecution history and searches in parent cases.	3/19/13	JRH
C09K5/045; 2205/22; 2205/43	03/30/2018	JRH

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
C09K	5/045; 2205/22; 2205/43	03/30/2018	JRH

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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or **Fax** (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

24504 7590 04/05/2018
THOMAS | HORSTEMEYER, LLP
3200 WINDY HILL ROAD, SE
SUITE 1600E
ATLANTA, GEORGIA 30339
UNITED STATES OF AMERICA

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/493,491	06/11/2012	Kenneth M. Ponder	821920-1032	1039

TITLE OF INVENTION: REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT OF R22 REFRIGERANT

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
REGULAR	SMALL	\$500	\$0.00	\$0.00	\$500	07/05/2018

EXAMINER	ART UNIT	CLASS-SUBCLASS
HARDEE, JOHN R	1761	252-067000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1. Thomas | Horstemeyer, LLP

2. _____

3. _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

☒ Issue Fee

☐ Publication Fee (No small entity discount permitted)

☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)

☐ A check is enclosed.

☒ Payment by credit card. ~~XXXXXXXXXXXX~~

☒ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 20-0778 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Todd Deveau/

Date April 24, 2018

Typed or printed name Todd Deveau

Registration No. 29,526

Electronic Patent Application Fee Transmittal				
Application Number:		13493491		
Filing Date:		11-Jun-2012		
Title of Invention:		REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT OF R22 REFRIGERANT		
First Named Inventor/Applicant Name:		Kenneth M. Ponder		
Filer:		Todd Deveau.		
Attorney Docket Number:		821920-1032		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	2501	1	500	500

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				500

Electronic Acknowledgement Receipt

EFS ID:	32432058
Application Number:	13493491
International Application Number:	
Confirmation Number:	1039
Title of Invention:	REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT OF R22 REFRIGERANT
First Named Inventor/Applicant Name:	Kenneth M. Ponder
Customer Number:	24504
Filer:	Todd Deveau.
Filer Authorized By:	
Attorney Docket Number:	821920-1032
Receipt Date:	24-APR-2018
Filing Date:	11-JUN-2012
Time Stamp:	16:53:40
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 500
RAM confirmation Number	042518INTEFSW16542501
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	Issue_Fee_Transmittal.pdf	1011747	no	1
			6482cd6a183ad4a28badb10ca493deba601aaada		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30279	no	2
			6dda80392a55c0b9334b8d23815591de838dcda		
Warnings:					
Information:					
Total Files Size (in bytes):			1042026		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/493,491	05/29/2018	9982179	821920-1032	1039

24504 7590 05/09/2018
THOMAS | HORSTEMEYER, LLP
3200 WINDY HILL ROAD, SE
SUITE 1600E
ATLANTA, GA 30339

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Kenneth M. Ponder, Cumming, GA;
Steffan Thomas JR., Buckhead, GA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
--	--

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of North Carolina on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 5:20-CV-147-M	DATE FILED 4/8/2020	U.S. DISTRICT COURT Eastern District of North Carolina
PLAINTIFF R421A LLC d/b/a Coice Refrigerants		DEFENDANT Dynatemp International, Inc., et al
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 9,982,179 B2	5/29/2018	Refrigerant with Lubricating Oil for Replacement of R22
2		
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK PETER A. MOORE, JR.	(BY) DEPUTY CLERK <i>James R. Smith, Deputy</i>	DATE 4/2/2020
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
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Case 5:20-cv-00147-M Document 7 Filed 04/09/20 Page 1 of 1

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DYNATEMP INTERNATIONAL, INC. and FLUOROFUSION
SPECIALTY CHEMICALS, INC.,
Petitioner,

v.

R 421A LLC d/b/a CHOICE REFRIGERANTS,
Patent Owner.

IPR2020-01660
Patent 9,982,179 B2

Before GRACE KARAFFA OBERMANN, MICHELLE N. ANKENBRAND,
and MONTÉ T. SQUIRE, *Administrative Patent Judges*.

SQUIRE, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Dynatemp International, Inc. and Fluorofusion Specialty Chemicals, Inc. (collectively, “Petitioner”) filed a Petition (Paper 4, “Pet.”) requesting the Board institute an *inter partes* review of claims 1–37 of U.S. Patent No. 9,982,179 B2 (Ex. 1001, “the ’179 patent”). Pet. 1. R 421A LLC d/b/a Choice Refrigerants (“Patent Owner”) filed a Preliminary Response (Paper 9, “Prelim. Resp.”). Prelim. Resp. 1. On our authorization, (Paper 13, “the March 11, 2021 Order”), Petitioner filed a Reply to the Preliminary Response (Paper 12, “Reply”) and Patent Owner filed a Sur-Reply (Paper 14, “Sur-Reply”).

We have authority under 35 U.S.C. § 314 to determine whether to institute an *inter partes* review, which provides that an *inter partes* review may not be instituted unless the information presented in the Petition shows that “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a); *see also* 37 C.F.R. § 42.4(a) (2020) (“The Board institutes the trial on behalf of the Director.”).

Having considered the Petition, Preliminary Response, Reply, and Sur-Reply, and evidence of record, for the reasons below, we exercise our discretion to deny institution of an *inter partes* review of the ’179 patent under 35 U.S.C. § 325(d).

II. BACKGROUND

A. Real-Parties-In-Interest

Petitioner identifies Dynatemp International, Inc. and Fluorofusion Specialty Chemicals, Inc., as the real parties-in-interest. Pet. 1. Patent Owner

identifies R 421A LLC and RMS of Georgia, LLC, as the real parties-in-interest. Paper 6, 2.

B. Related Matters

The parties identify the following pending district court actions involving the '179 patent as related matters: *R 421 LLC d/b/a Choice Refrigerants v. Dynatemp International, Inc.*, Civil Action No. 5:2020-cv-00147-FL (E.D.N.C.)¹ and *Dynatemp International, Inc. v. RMS of Georgia, LLC d/b/a Choice Refrigerants*, Civil Action No. 5:2020-cv-00142-FL (E.D.N.C.) (collectively, “the District Court Action”). Pet. 2; Paper 6, 1. Petitioner has also filed petitions challenging claims of other patents asserted in the District Court Action in IPR2021-00199 and PGR2021-00008. Pet. 2; Paper 6, 3.

C. The '179 Patent (Ex. 1001)

The '179 patent is titled “Refrigerant with Lubricating Oil for Replacement of R22 Refrigerant ” and issued May 29, 2018,² with claims 1–37. Ex. 1001, codes (54), (45), 10:2–14:21. The '179 patent is directed to an apparatus and method wherein potential ozone layer-damaging chlorodifluoromethane refrigerant (R-22) is substituted with a mix of less environmentally damaging refrigerants pentafluoroethane (R-125) and tetrafluoroethane (R-134a) in chlorodifluoromethane-based air-cooling systems. *Id.* at code (57), 1:18–22, 3:66–4:1.

¹ Patent Owner indicates that Civil Action No. 5:2020-cv-00147-FL (E.D.N.C.) was administratively closed and consolidated with Civil Action No. 5:2020-cv-00142-FL on Oct. 23, 2020. Paper 6, 1.

² The '179 patent claims priority to a provisional application filed on September 8, 2003. Ex. 1001, code (60), 1:8–13.

The '179 patent discloses that the pentafluoroethane and tetrafluoroethane are mixed in a defined ratio such that the temperature-pressure relationship of the mixture approximates that of R-22, and the mixture is compatible with and can be used as a replacement for R-22. *Id.* at 1:22–27, 4:2–10, 4:19–25, code (57).

The '179 patent further discloses that the pentafluoroethane and tetrafluoroethane refrigerant is mixed with a soluble lubricating oil to provide lubrication to the refrigerating apparatus, and that the lubricant is soluble in and compatible with both the pentafluoroethane and tetrafluoroethane refrigerant mixture and R-22. *Id.* at 1:30–36, code (57). The '179 patent explains that because the lubricant is compatible with both the pentafluoroethane and tetrafluoroethane refrigerant mixture and R-22, it may be included with the pentafluoroethane and tetrafluoroethane refrigerant mixture and the mixture utilized in the refrigeration systems without deleterious effect upon moving parts of the refrigeration apparatus that require lubrication from the refrigerant. *Id.* at 4:10–18.

In an exemplary embodiment, the '179 patent describes a refrigerant composition having a ratio of about 42 weight percent pentafluoroethane to about 58 weight percent 1,1,1,2-tetrafluoroethane and including from about 0 to about 20 weight percent of a lubricating oil that is soluble in R-22, pentafluoroethane, and 1,1,1,2-tetrafluoroethane. *Id.* at 4:34–43.

D. Illustrative Claim

Petitioner challenges claims 1–37 of the '179 patent, of which claims 1, 8, 15, 21, 26, and 31 are independent. Pet. 1, 4–5, 17. Claim 1 is illustrative of the claimed subject matter and recites:

1. In an apparatus designed for use with chlorodifluoromethane refrigerant, the improvement comprising substituting the chlorodifluoromethane with a refrigerant composition designed to achieve a phase change, the refrigerant composition comprising a combination of refrigerant gases, said refrigerant gases consisting of a blend of tetrafluoroethane and pentafluoroethane, the ratio of the tetrafluoroethane to the pentafluoroethane being selected such that the blend exhibits a dew point at about -32° F. or a bubble point at about -41.5° F. at about one standard atmosphere of pressure,

wherein in the substitute refrigerant said pentafluoroethane is present in an amount of 59% to 57% by weight and said tetrafluoroethane is present in an amount of 41 % to 43% by weight of the combined weight of the pentafluoroethane and tetrafluoroethane on the basis of the combined weights of said pentafluoroethane and said tetrafluoroethane totaling 100%, and

wherein the refrigerant composition further comprises non-refrigerant gas components, said non-refrigerant gas components including a lubricating oil, wherein the lubricating oil is present up to about 20% by weight of the refrigerant gases and is soluble in chlorodifluoromethane, tetrafluoroethane and pentafluoroethane wherein the lubricating oil is selected from the group consisting of mineral oil, synthetic alkyl aromatic lubricants, and mixtures thereof, and the tetrafluoroethane is 1,1,1,2-tetrafluoroethane.

Ex. 1001, 10:2–29.

E. Asserted Evidence

Petitioner relies on the following references in the asserted grounds of unpatentability:

Reference	Exhibit No. ³
US 6,207,071 B1 (issued Mar. 27, 2001) (“Takigawa”)	1006
US 6,606,868 B1 (issued Aug. 19, 2003) (“Powell”)	1007
US 6,863,840 B2 (issued Mar. 8, 2005) (“Goble”)	1008
US 5,688,432 (issued Nov. 18, 1997) (“Pearson”)	1009
US 2003/0062508 A1 (published Apr. 3, 2003) (“Singh”)	1011
Federal Register, Vol. 71, No. 188 / Thursday, Sept. 28, 2006 / Rules and Regulations, 71 FR 56884–56893 (2006) (“Federal Register”)	1018
US 6,655,160 B2 (published Dec. 2, 2003) (“Roberts”)	1019
Lemmon et al., <i>Equations of State for Mixtures of R-32, R-125, R-134a, R-143a, and R-152a</i> , MS J. Phys. Chem. Ref. Data (Aug. 30, 2002) (“Lemmon”)	1020

Pet. 4–5, 17. Petitioner also relies on the declaration testimony of Dr. Eckhard Groll (Ex. 1013) in support of its contentions. *Id.* at 1, 21.

F. Asserted Grounds of Unpatentability

Petitioner contends the challenged claims are unpatentable based on the following grounds:⁴

³ For citations to Exhibits 1003, 1004, 1005, 1018, and 1020, we refer and cite to the page numbers added to the documents in the lower right side of each page.

⁴ Regarding Ground 1 of the Petition (Pet. 4, 30), for purposes of this Decision, we refer to Petitioner’s challenge to claims 1–37 under § 103 as obvious over Goble, Singh, and Takigawa as asserted “Ground 1A” and the challenge to claims 21–37 under § 102 as anticipated by Goble as asserted “Ground 1B.”