

Electronic Acknowledgement Receipt

EFS ID:	4425336
Application Number:	10937736
International Application Number:	
Confirmation Number:	1006
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./Angela Brathwaite
Filer Authorized By:	Todd Deveau.
Attorney Docket Number:	821920-1030
Receipt Date:	09-DEC-2008
Filing Date:	08-SEP-2004
Time Stamp:	19:18:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 2190
RAM confirmation Number	4982
Deposit Account	200778
Authorized User	

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

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Appeal Brief Filed	00828990.PDF	2787559 e99acfa36c9d548eac8cc1c36b47d1f5e08a068	no	67
Warnings:					
Information:					
2	Notice of Appeal Filed	00828991.PDF	51376 c2ab4faa0d054582bfa516add57c838997ef7df	no	1
Warnings:					
Information:					
3	Applicant summary of interview with examiner	00828981.PDF	33868 3bc664a627709dc04cc24160f108a984f3740464	no	1
Warnings:					
Information:					
4	Extension of Time	00828982.PDF	56421 ed1e5b351a891395aa57718b1dd69feb4bc62ac	no	1
Warnings:					
Information:					
5	Fee Worksheet (PTO-06)	fee-info.pdf	33641 76e34f2099aaee65c838e3fbd45476de8767fa92	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			2962865		

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.

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.



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.
-----------------	-------------	----------------------	---------------------	------------------

10/937,736 09/08/2004 Kenneth M. Ponder 821920-1030 1006

24504 7590 12/15/2008
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

EXAMINER

HARDEE, JOHN R

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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12/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Interview Summary	Application No. 10/937,736	Applicant(s) PONDER ET AL.	
	Examiner JOHN R. HARDEE	Art Unit 1796	

All participants (applicant, applicant's representative, PTO personnel):

(1) JOHN R. HARDEE. (3)_____.

(2) Atty. Michael Barker. (4)_____.

Date of Interview: 08 December 2008.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.

If Yes, brief description: _____.

Claim(s) discussed: _____.

Identification of prior art discussed: _____.

Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☒ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: The examiner left a message in response to a message left by Mr. Barker on December 5, 2008. In response to Mr. Barker's request, the examiner agreed to consider the affidavit of September 18, 2008, but stated that it was not persuasive.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

**UNITED STATES DEPARTMENT OF COMMERCE****U.S. Patent and Trademark Office**

Address : COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10937736	9/8/2004	PONDER ET AL.	821920-1030

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

EXAMINER

JOHN R.. HARDEE

ART UNIT**PAPER**

1796

20081208

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

/John R. Hardee/
Primary Examiner, Art Unit 1796

DETAILED ACTION

1. Upon further consideration, applicant's declaration of September 18, 2008 is entered. However, it is not persuasive because it only presents arguments and opinions, rather than data. The declarant argues that R-421A is superior to R-421B because it has a different temperature-pressure profile than R-421B and because that temperature pressure profile is superior to that of R-421B for high and medium temperature applications. This is not persuasive because R-421B is not the closest prior art. As it differs substantially from R-421A, the person of ordinary skill in the art would expect it to have a different temperature-pressure profile. The superiority of R-421A is stated as a conclusion, and no data have been presented. Furthermore, applicant has not claimed a method of generating refrigeration at high and medium temperatures. Applicant has claimed a composition, and the composition remains obvious over the cited art for the reasons of record.

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner, Dr. John R. Hardee, whose telephone number is (571) 272-1318. The examiner can normally be reached on Monday through Friday from 8:00 until 4:30. In the event that the examiner is not available, his supervisor, Mr. Harold Pyon, may be reached at (571) 272-1498.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8100.

Art Unit: 1796

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John R. Hardee/
Primary Examiner
December 8, 2008



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/937,736	09/08/2004	Kenneth M. Ponder	821920-1030	1006

24504 7590 01/21/2009

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

EXAMINER

ART UNIT PAPER NUMBER

DATE MAILED: 01/21/2009

Please find below and/or attached an Office communication concerning this application or proceeding.

**Notification of Non-Compliant Appeal Brief
(37 CFR 41.37)**

Application No.

10/937,736

Applicant(s)

PONDER ET AL.

Examiner

JOHN HARDEE

Art Unit

1796

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

The Appeal Brief filed on 09 December 2008 is defective for failure to comply with one or more provisions of 37 CFR 41.37.

To avoid dismissal of the appeal, applicant must file an amended brief or other appropriate correction (see MPEP 1205.03) within **ONE MONTH or THIRTY DAYS** from the mailing date of this Notification, whichever is longer.
EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136.

1. ☐ The brief does not contain the items required under 37 CFR 41.37(c), or the items are not under the proper heading or in the proper order.
2. ☒ The brief does not contain a statement of the status of all claims, (e.g., rejected, allowed, withdrawn, objected to, canceled), or does not identify the appealed claims (37 CFR 41.37(c)(1)(iii)).
3. ☐ At least one amendment has been filed subsequent to the final rejection, and the brief does not contain a statement of the status of each such amendment (37 CFR 41.37(c)(1)(iv)).
4. ☐ (a) The brief does not contain a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings, if any, by reference characters; and/or (b) the brief fails to: (1) identify, for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function under 35 U.S.C. 112, sixth paragraph, and/or (2) set forth the structure, material, or acts described in the specification as corresponding to each claimed function with reference to the specification by page and line number, and to the drawings, if any, by reference characters (37 CFR 41.37(c)(1)(v)).
5. ☐ The brief does not contain a concise statement of each ground of rejection presented for review (37 CFR 41.37(c)(1)(vi)).
6. ☐ The brief does not present an argument under a separate heading for each ground of rejection on appeal (37 CFR 41.37(c)(1)(vii)).
7. ☐ The brief does not contain a correct copy of the appealed claims as an appendix thereto (37 CFR 41.37(c)(1)(viii)).
8. ☐ The brief does not contain copies of the evidence submitted under 37 CFR 1.130, 1.131, or 1.132 or of any other evidence entered by the examiner **and relied upon by appellant in the appeal**, along with a statement setting forth where in the record that evidence was entered by the examiner, as an appendix thereto (37 CFR 41.37(c)(1)(ix)).
9. ☐ The brief does not contain copies of the decisions rendered by a court or the Board in the proceeding identified in the Related Appeals and Interferences section of the brief as an appendix thereto (37 CFR 41.37(c)(1)(x)).
10. ☐ Other (including any explanation in support of the above items):

2. Status of claims must identify the status of all claims filed in the application (11-20, 26, 28, and 32, 36).

Entire brief is not required only the section found defective.

Tracey M Young/Tracey M Young/
Patent Appeal Specialist

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

☒ In re application of*: Ponder et al.

Serial No.: 10/937,736

Group No.: 1796

Filed: September 8, 2004

Examiner: Hardee, John R.

For*: Refrigerant with Lubricating Oil for Replacement of R-22 Refrigerant

☐ Patent No.:

Issued:

NOTE: Insert name(s) of inventor(s) and title also for patent. Where the refund request is with respect to a maintenance fee payment also insert application serial number and filing date.

Mail Stop 16
Director of the US Patent and
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P.O. Box 1450
Alexandria, VA 22313-1450

ATTENTION: Refund Section, Accounting Division, Office of Finance
REQUEST FOR REFUND
(37 C.F.R. 1.28(a))

NOTE: 37 C.F.R. § 1028(a) "(a) Refunds based on later establishment of small entity status. A refund pursuant to §1.26, based on establishment on small entity status, of a portion of fees timely paid in full prior to establishing status as a small entity may only be obtained if an assertion under § 1.27(c) and a request for refund of the excess amount are filed within three months of the date of the timely payment of the full fee. The three-month time period is not extendable under §1.136. Status as small entity is waived for any fee by the failure to establish the status prior to paying, at the time of paying, or within three months of the date of payment of, the full fee."

NOTE: Submission of a Change of Status (small/not small entity status) after issuance of the Notice of Allowance in an application does not result in a reduction in patent term adjustment under 37 C.F.R. §1.704(c)(1). See Notice of May 29, 2001, 1247 OG 111-112, June 26, 2001.

CERTIFICATE OF MAILING 37 CFR 1.8(a)

I hereby certify that this correspondence is being:

X filed through the USPTO Electronic Filing System.

transmitted by facsimile on the date shown below to the United States Patent and Trademark Office at (571) 273-8300.

1/23/09
Date

Ungene Keenan
Signature

I. SUBMISSION OF SMALL ENTITY ASSERTION

- ☐ Attached is an assertion of small entity status in this application.
☒ An assertion of small entity status was filed in this application on September 8, 2004.

II. REFUND REQUEST

This request for refund is made within three months of the date a fee was paid in this application on (date) December 9, 2008 in the amount of \$ 2190.

NOTE: The two-month period (§ 1.28(a)) is not included in the provisions for extension under 37 C.F.R. 1.136 since it is not a period for response. Notice of November 30, 1983, 49 FR 548, January 4, 1984.

III. FEES PAID FOR WHICH REFUND REQUESTED

	AMOUNT OF REFUND REQUESTED
☐ filing fee	\$ _____
☐ surcharge for filing the basic filing fee on a date later than the filing date of the application (37 CFR 1.16(e)) and/or	\$ _____
☐ surcharge for filing the oath or declaration on a date later than the filing date of the application (37 CFR 1.16(e))	\$ _____
☒ extension of term	\$ <u>555.00</u>
☐ issue fee	\$ _____
☐ patent maintenance fee	
☐ first maintenance fee	\$ _____
☐ second maintenance fee	\$ _____
☐ third maintenance fee	\$ _____
☐ patent maintenance fee surcharge.	

NOTE: The refund provisions of § 1.28(a) for later submitted small entity statements apply to maintenance fees. Notice of July 30, 1984, 1046 O.G. 28-37

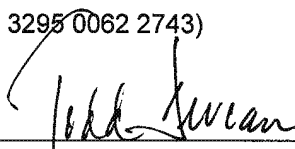
☒ other: Notice of Appeal	\$ <u>270.00</u>
☒ other: Filing a Brief in Support of an Appeal	\$ <u>270.00</u>

TOTAL REFUND REQUESTED **\$ 1095.00**

IV. MANNER OF REFUND

Please make refund by:

- ☒ Deposit Account No. **20-0778**.
- ☐ Credit card (Master Card No. 5588 3295 0062 2743)
- ☐ Refunding overpayment



Todd Deveau; Reg. No.: 29,526

**THOMAS, KAYDEN, HORSTEMEYER
& RISLEY, L.L.P.**

600 Galleria Parkway, Suite 1500
Atlanta, Georgia 30339-5948
770-933-9500

Electronic Acknowledgement Receipt

EFS ID:	4664639
Application Number:	10937736
International Application Number:	
Confirmation Number:	1006
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./Virginia Keenan
Filer Authorized By:	Todd Deveau.
Attorney Docket Number:	821920-1030
Receipt Date:	23-JAN-2009
Filing Date:	08-SEP-2004
Time Stamp:	13:35:01
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Refund Request	00852053.PDF	81771 3e322794f860edd04c5ab916ecf7139d0d41b0dc	no	3

Warnings:

Information:

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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

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2009 JAN 23 PM 4: 07

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

☒ In re application of*: Ponder et al.^e

Serial No.: 10/937,736

Group No.: 1796

Filed: September 8, 2004

Examiner: Hardec, John R.

For*: Refrigerant with Lubricating Oil for Replacement of R-22 Refrigerant

☐ Patent No.:

Issued:

NOTE: Insert name(s) of inventor(s) and title also for patent. Where the refund request is with respect to a maintenance fee payment also insert application serial number and filing date.

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P.O. Box 1450
Alexandria, VA 22313-1450

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CERTIFICATE OF MAILING 37 CFR 1.8(a)

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1/23/09
Date

Margaret Keenan
Signature

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☒ other: Notice of Appeal	\$ <u>270.00</u>
☒ other: Filing a Brief in Support of an Appeal	\$ <u>270.00</u>

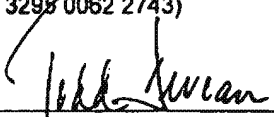
TOTAL REFUND REQUESTED \$ 1095.00

PATENT

IV. MANNER OF REFUND

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☐ Refunding overpayment


Todd Deveau; Reg. No.: 29,526

**THOMAS, KAYDEN, HORSTEMEYER
& RISLEY, L.L.P.**
600 Galleria Parkway, Suite 1500
Atlanta, Georgia 30339-5948
770-933-9500

Electronic Patent Application Fee Transmittal

Application Number:	10937736			
Filing Date:	08-Sep-2004			
Title of Invention:	Refrigerant with lubricating oil for replacement of R22 refrigerant			
First Named Inventor/Applicant Name:	Kenneth M. Ponder			
Filer:	Todd Deveau./Angela Brathwaite			
Attorney Docket Number:	821920-1030			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:	Adjustment date: 02/06/2009 MGEEREN1 12/10/2008 INTEFSW 00004902 200778 10937736 01 FC:1253 1110.00 CR 02 FC:1401 540.00 CR 03 FC:1402 540.00 CR			
Patent-Appeals-and-Interference:	02/06/2009 MGEEREN1 00000000 200778 10937736			
Notice of appeal	1401	01 FC:2401 02 FC:2402	230.00 DA 270.00 DA	540
Filing a brief in support of an appeal	1402	03 FC:2253 1	555.00 DA 540	540
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Extension - 3 months with \$0 paid	1253	1	1110	1110
Miscellaneous:				
Total in USD (\$)				2190

**Thomas | Kayden**

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP

600 Galleria Parkway, S.E.
Suite 1500
Atlanta, GA 30339
tkhr.com

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February 19, 2009

[Matter No.821920-1030]

TO:
United States Patent and Trademark Office
Attn: Tracey M. Young

FROM:
Todd Deveau

FAX: 571-273-8300
571-273-1644

FAX: 770-951-0933

TEL: 770-933-9500

EMAIL: *todd.deveau@tkhr.com*

RE: U.S. application serial no. 10/937,736
Response and Amendment to Notice of Non-Compliant Appeal Brief

Number of Pages (Including This Cover Sheet): - 3 - Page(s)

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Fort Collins, Colorado

PAGE 1/3 * RCVD AT 2/19/2009 10:11:56 AM [Eastern Standard Time] * SVR:USPTO-EFAX-5/44 * DNIS:2738300 * CSID:7709510933 * DURATION (mm-ss):01-06

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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FEB 19 2009

In Re Application of:

Docket No.: 821920-1030

PONDER, K., et al.,

Art Unit: 1796

Serial No.: 10/937,736

Examiner: John R. Hardee

Filing Date: September 8, 2004

Confirmation No.: 1006

For: Refrigerant with Lubricating Oil for Replacement of R-22 Refrigerant

RESPONSE AND AMENDMENT TO NOTICE OF NON-COMPLIANT APPEAL BRIEF

Mail Stop: Appeal Brief-Patents

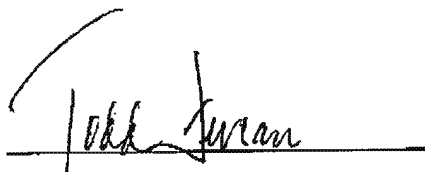
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

Per the telephone conversation with Tracey M. Young on February 18, 2009 and in response to the Notice of Non-Compliant Appeal Brief filed January 21, 2009, please find attached a replacement page 2 for the Appeal Brief filed December 9, 2008, in which section "III" is amended to include the status of all claims.

Respectfully submitted,

By:



Todd Deveau

Registration No. 29,526

REPLACEMENT PAGE 2

Serial No.: 10/937,736
Docket No.: 821920-1030

I. REAL PARTY IN INTEREST

The real party in interest is Stefko Properties LLC, a for profit corporation established under the laws of the State of Georgia and having a principal place of business at 610 McFarland-400 Drive, Alpharetta, Georgia 30004

II. RELATED APPEALS AND INTERFERENCES

There are no known related appeals or interferences that will affect or be affected by a decision in this Appeal.

III. STATUS OF CLAIMS

Claims 1-10, 21-25, 27, 29-31, 33-35, and 37-40 are pending and finally rejected. Claims 11-20, 26, 28, 32, and 36 are canceled. The final rejection of claims 1-10, 21-25, 27, 29-31, 33-35, and 37-40 is appealed.

IV. STATUS OF AMENDMENTS

No amendments have been made or requested since the mailing of the FINAL Office Action. All amendments submitted prior to the FINAL action have been entered. A copy of the current claims is attached in the Claims Appendix (See below).

V. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed inventions are summarized below with reference numerals and references to the written description ("Specification") and drawings. The subject matter described in the following appears in the original disclosure at least where indicated, and may further appear in other places within the original disclosure.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/937,736

09/08/2004

Kenneth M. Ponder

821920-1030

1006

24504 7590 03/31/2009
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

EXAMINER

HARDEE, JOHN R

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

03/31/2009

PAPER

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The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/937,736
Filing Date: September 08, 2004
Appellant(s): PONDER ET AL.

Mr. Todd Deveau
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 9, 2008 appealing from the Office action mailed June 27, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,207,071

TAKIGAWA et al.

3-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-10, 21-25, 27, 29-31, 33-35 and 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takigawa et al., US 6,207,071. The reference discloses lubricating oil compositions and their use in compositions comprising R134a and R125 (col. 1, lines 13+). The reference further discloses the use of hydrofluorocarbons as replacements for chlorofluorocarbons (col. 1, lines 20+). Suitable lubricants include the alkylbenzene oils described at col. 2, lines 30+. Refrigerants include alkane fluorides containing 40% or more of R134a in admixture with alkyl fluorides containing, most preferably, 40% or more of R125 (col. 8, lines 20+). The reference further discloses that there is "no restriction as to the kind of HFC to be mixed with" the disclosed refrigerants. The examiner takes the position that this can reasonably be construed to mean that no additional HFC need be added, and that the disclosure reads on refrigerant compositions *consisting of* 40-60% R134a and 60-40% of R125. Conventional additives may be added, including those disclosed at the top of col. 8. The examiner takes the position that anticorrosion additives are conventional, and that their use would be obvious over this disclosure. Lubricant compositions comprising naphthenic mineral oil and polyol polyesters are disclosed in Table 1. The examiner takes the position that "naphthenic mineral oil" has a genus-species relationship with the lubricant recited in claim 2, so its use would be obvious over the disclosure in the absence of unexpected results. Note the disclosure in Evaluation Tests 2 and 3 of refrigerant being premixed with lubricant prior to charging a compressor. The

disclosed lubricating refrigerant compositions are useful in a variety of refrigeration apparatus, as disclosed at the top of col. 9. This reference differs from the claimed subject matter in that it does not disclose a composition which reads on appellant's claims with sufficient specificity to constitute anticipation.

It would have been obvious at the time the invention was made to make such a composition, because this reference teaches that all of the ingredients recited by appellants are suitable for inclusion in a refrigerant composition. The person of ordinary skill in the refrigeration art would expect the recited compositions to have properties similar to those compositions which are exemplified, absent a showing to the contrary.

In the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed Cir. 1990).

(10) Response to Argument

At page 5 of the brief, appellants present five arguments traversing the above rejection. These arguments will be addressed in the order presented.

1) Appellant argues that no rationale was presented that the teachings of Takigawa would lead one of skill in the art to the claimed refrigerant compositions. This is not persuasive because the reference discloses compositions "an alkane fluoride having 1 to 3 carbon atoms...containing 40% by weight or more of 1,1,1,2-tetrafluoroethane and/or an alkyl fluoride having 1 to 3 carbon atoms...and containing...more preferably, 40% by weight or more of pentafluoroethane (col. 8, lines

20+). The reference goes on to say that there is no restriction as to the kind of hydrocarbon to be mixed with the tetrafluoroethane and/or the pentafluoroethane (col. 8, lines 29+). The examiner construes this to mean that *no other alkyl fluoride at all* need be mixed with tetrafluoroethane and/or pentafluoroethane, and that the disclosure can fairly be construed as reading on a mixture consisting of 40% or more of tetrafluoroethane and 40% or more of pentafluoroethane. The reference does not teach that either the first alkyl fluoride or the second alkyl fluoride need be a mixture of more than one alkyl fluoride, and a mixture of 40% or more of tetrafluoroethane and 40% or more of pentafluoroethane represents the simplest case of a binary mixture which can be fairly construed from this passage.

2) Appellant argues that not every limitation is taught in the reference. In the middle of p. 8 of the brief, appellants argue that a composition of such “consisting” scope is not disclosed. This is not persuasive because the rejection was made under 103 rather than 102, and the examiner maintains the position that the simplest binary composition containing both tetrafluoroethane and pentafluoroethane in the most preferable percentages is one which consists of 40% or more of tetrafluoroethane and 40% or more of pentafluoroethane.

3) Appellant argues that there is no reasonable expectation of success that the hypothetical modification of the reference would result in the recited refrigerant composition. This is not persuasive because no modification of the reference need be made: The simplest binary composition fairly taught by the reference, in the most preferred percentages, consists of 40% or more of each of tetrafluoroethane and

pentafluoroethane. Regarding expectation of success, the reference is drawn to refrigerant compositions. In addition, optimizing within the range of 40% or more of each of the refrigerants amounts to routine experimentation.

4) Appellants argue that the reference solves a different problem from that addressed by the appellants. Appellants' concerns include high-temperature application and replacing R-22 refrigerant (an ozone damaging chlorofluorocarbon). Accepting appellant's argument regarding high-temperature application, there is still motivation in the reference to make the compositions as recited. Regarding replacement of chlorofluorocarbon refrigerants, this is disclosed at col. 1, lines 20+. Replacement or retrofitting of chlorofluorocarbon refrigerating equipment is not disclosed in the reference as being necessary, and no such retrofitting is mentioned in the examples. The compositions are simply charged to standard refrigeration equipment and evaluated.

Kenneth Ponder's declaration states that applicant's refrigerant R-421A, a composition according to the present claims, was developed to address a very different problem from appellants' R-421B, which contains 85% of pentafluoroethane and 15% of tetrafluoroethane. R-421A is used for high- to medium-temperature applications, and R-421B is used for low-temperature applications. R-421A is therefore superior to R-421B for high- and medium-temperature applications. The examiner concedes the veracity of these statements and the expertise of Mr. Ponder. Nonetheless, the reference provides motivation to make compositions as claimed for the reasons given above. In addition, the reference is not drawn specifically to either of high- or medium-temperature

refrigeration or to low-temperature refrigeration. Nor are appellants' claims. Finally, R-421B is not made according to the teaching of the reference, which calls for at least 40% by weight of tetrafluoroethane. The examiner concedes that the behavior profiles of various refrigeration mixtures made according to the reference will be vastly different, but all such compositions will successfully generate refrigeration. In the absence of evidence to the contrary, there is every expectation of success. Determination of the best application for any such mixture amounts to routine optimization.

5) Finally, appellants argue that the recited compositions have a superior property not recognized in the reference. This is addressed in Mr. Ponder's declaration, which states that compositions according to the invention are superior for high- and low-temperature applications. While this is undoubtedly the case, Mr. Ponder's comparison is with R-421B, which is not made according to the reference. It is not the closest prior art. In addition, appellants' claims do not appear to be commensurate in scope with what is being argued, which is generation of high- and medium-temperature refrigeration.

Andy Gbur's declaration of May, 2008 states that different blends of pentafluoroethane and tetrafluoroethane will have very different properties and that one such composition would not render another such composition obvious. The examiner concedes the argument, but it is not persuasive because it is the reference which makes R-421A obvious, not R-421B. Appellants further argue that the final rejection of June 27, 2008 does not address Mr. Gbur's opinion that one skilled in the art would be motivated to make a composition as claimed, and that the Office therefore concedes Mr.

Gbur's opinion. Mr. Gbur is entitled to his opinion, but the examiner does not and did not concede its legal correctness. Mr. Gbur's opinion was addressed in paragraph 3 of the final office action. The examiner maintains his finding that the reference makes obvious the formulation of compositions as recited for the reasons given above.

Appellants conclude by arguing that there is no teaching in the reference that different ratios of pentafluoroethane to tetrafluoroethane can result in refrigeration gas compositions for different temperature applications. This is correct, but it is obviously true whether Takigawa restates it or not. Why else would one make differing compositions of the same gases? However, it is not persuasive because determination of the best application within the field of refrigeration for any refrigerant gas which can be made according to the reference amounts to routine experimentation.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/John R. Hardee/

Primary Examiner, Art Unit 1796

Conferees:

/Harold Y Pyon/

Supervisory Patent Examiner, Art Unit 1796

/Christopher A. Fiorilla/

Chris Fiorilla

Supervisory Patent Examiner, Art Unit 1700

Application/Control Number: 10/937,736
Art Unit: 1796

Page 9



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/937,736

09/08/2004

Kenneth M. Ponder

821920-1030

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04/29/2009

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
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ATLANTA, GA 30339-5994

EXAMINER

HARDEE, JOHN R

ART UNIT

PAPER NUMBER

1796

MAIL DATE

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PAPER

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10937736	9/8/2004	PONDER ET AL.	821920-1030

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
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ATLANTA, GA 30339-5994

EXAMINER

JOHN R.. HARDEE

ART UNIT**PAPER**

1796

20090421

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

/John R. Hardee/
Primary Examiner, Art Unit 1796

DETAILED ACTION

Information Disclosure Statement

1. Appellant's Information Disclosure Statement of October 6, 2005 has been considered, and a signed copy is enclosed.
2. The Examiner's Answer should have been stated as being responsive to appellant's appeal brief of February 19, 2009.
3. The related proceedings section of the examiner's answer was omitted and is attached:

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner, Dr. John R. Hardee, whose telephone number is (571) 272-1318. The examiner can normally be reached on Monday through Friday from 8:00 until 4:30. In the event that the examiner is not available, his supervisor, Mr. Harold Pyon, may be reached at (571) 272-1498.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 1796

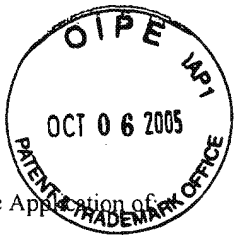
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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/John R. Hardee/
Primary Examiner
April 21, 2009



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of

Ponder, et al.

Confirmation No.: 1006

Group Art Unit: 1751

Serial No.: 10/937,736

Examiner: Unknown

Filed: 09/08/2004

Docket No.: 821920-1030

For: Refrigerant with Lubricating Oil for Replacement of R-22 Refrigerant

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
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Sir:

This information disclosure statement is filed in accordance with 37 C.F.R. §§ 1.56, 1.97, and 1.98, and specifically:

- ☒ under 37 CFR 1.97(b), or
(within Three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:
☐ Statement Under 37 C.F.R. 1.97(e), or
☐ a \$180.00 fee under 37 CFR 1.17(p), or
(After the CFR 1.97(b) time period, but before the final office action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with a:
☐ Statement under 37 CFR 1.97(e), and
☐ a \$180.00 petition fee set forth in 37 CFR 1.17(p).
(Filed after final office action or notice of allowance, whichever occurs first, but before payment of the issue fee)

Enclosed is a check in the amount of \$.

Enclosed is Credit Card Payment Form (PTO-2038) in the amount of \$.

Please charge \$ to deposit account . At any time during the pendency of this application, please charge any fees required to Deposit Account pursuant to 37 CFR 1.25. The Commissioner is hereby requested to credit any overpayment to Deposit Account No. .

- ☒ Applicant(s) submit herewith *Form PTO 1449A - Information Disclosure Statement by Applicant* together with copies (where required) of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may or may not be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56. As required by 37 C.F.R. §1.98(a), a legible copy of each document is provided.
- ☐ A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individual(s) designated in 37 CFR 1.56(c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on the form PTO 1449 and is enclosed herewith.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.R.H.

Dynatemp EX1007
Page 533 of 665

R03946

The following rights are reserved by the Applicant(s): the right to establish the patentability of the claimed invention over any of the listed documents should they be applied as reference, and/or the right to prove that some of these documents may not be prior art, and/or the right to prove that some of these documents may not be enabling for the teachings they purport to offer.

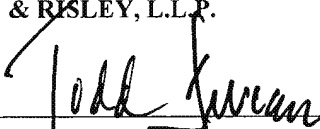
This statement should not be construed as a representation that an exhaustive search has been made, or that information more material to the examination of the present application does not exist. Any statements or identifications regarding the relevance of any portion(s) of cited references should not be construed as a representation that the most relevant portion(s) have been identified, and the absence of such statements or identifications should not be construed as representations that there are no relevant portion(s). The Examiner is specifically requested not to rely solely on the materials submitted herewith. The Examiner is requested to conduct an independent and thorough review of the documents, and to form independent opinions as to their significance.

It is requested that the information disclosed herein be made of record in this application and that the Examiner initial and return a copy of the enclosed PTO-1449 to indicate the documents have been considered.

Respectfully Submitted,

**THOMAS, KAYDEN, HORSTEMEYER
& RISLEY, L.L.P.**

By:



Todd Deveau, Reg. No. 29,526

100 Galleria Parkway, Suite 1750
Atlanta, Georgia 30339-5948
770-933-9500

Form PTO-1449

Attorney Docket No.
821920-1030Serial No.
10/937,736**INFORMATION DISCLOSURE CITATION**Applicant
PonderFiling Date
09/08/2004Group
1751

OCT 06 2005

(Use several sheets if necessary)

U.S. PATENT DOCUMENTS

Examiner Initials	Item	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	A	3,092,981	06/11/63	Begeman et al.			
	B	3,642,634	02/15/72	Olund			
	C	3,733,850	05/22/73	Olund			
	D	4,046,533	09/06/77	Olund			
	E	4,963,282	10/16/90	Jolley et al.			
	F	4,971,712	11/20/90	Gorski et al.			
	G	4,983,312	01/08/91	Tamura et al.			
	H	5,096,606	03/17/92	Hagihara et al.			
	I	5,145,594	09/08/92	Anton et al.			
	J	5,254,280	10/19/93	Thomas et al.			
	K	5,384,057	01/24/95	Wilczek			

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	L	JP 5 093198A	04/16/93	Japan			X	
	M						X	
	N							
	O							

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

	P	
	Q	
	R	

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EXAMINER'S SIGNATURE:

/John R. Hardee/

DATE CONSIDERED:

04/21/2009

Patent and Trademark Office; U. S. DEPARTMENT OF COMMERCE

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Dynatemp EX1007

Page 535 of 665

R03948

Form PTO-1449				Attorney Docket No. 821920-1030		Serial No. 10/937,736	
INFORMATION DISCLOSURE CITATION				Applicant Ponder			
<i>(Use several sheets if necessary)</i>				Filing Date 09/08/2004		Group 1751	

U.S. PATENT DOCUMENTS							
Examiner Initials	Item	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	A	5,417,872	05/23/95	Fukuda et al.			
	B	5,431,835	07/11/95	Katafuchi et al.			
	C	5,454,966	10/03/95	Thomas et al.			
	D	5,492,643	02/20/96	Weber, III			
	E	5,520,833	05/28/96	Kaneko			
	F	5,942,149	08/24/99	Weber, III			
	G	6,565,766	05/20/03	Weber, III			
	H	2004/0200992	10/14/04	Weber, III			
	I						
	J						
	K						

FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation
							Yes No
	L						
	M						
	N						
	O						

OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, etc.)</i>	
P	
Q	
R	

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EXAMINER'S SIGNATURE: /John R. Hardee/	DATE CONSIDERED: 04/21/2009
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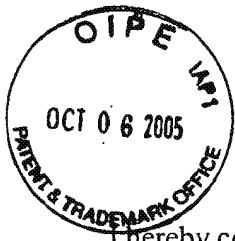
Patent and Trademark Office; U. S. DEPARTMENT OF COMMERCE

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Page 536 of 665

R03949



1PW

CERTIFICATE OF MAILING

I hereby certify that the below listed items are being deposited with the U.S. Postal Service as first class mail in an envelope addressed to:

Mail Stop DD
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

on 10/3/05

Laurie Delesandro
Laurie Delesandro

In Re Application of:

Ponder, et al.

Serial No.: 10/937,736

Filed: 09/08/2004

Confirmation No.: 1006

Group Art Unit: 1751

Examiner: Unknown

Docket No.: 821920-1030

For: Refrigerant with Lubricating Oil for Replacement of R-22 Refrigerant

The following is a list of documents enclosed:

Return Postcard
Information Disclosure Statement
PTO 1449

Further, the Commissioner is authorized to charge Deposit Account No. 20-0778 for any additional fees required. The Commissioner is requested to credit any excess fee paid to Deposit Account No. 20-0778.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.R.H.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Docket No.: 821920-1030

PONDER, K., et al.,

Art Unit: 1796

Serial No.: 10/937,736

Examiner: John R. Hardee

Filing Date: September 8, 2004

Confirmation No.: 1006

For: **Refrigerant with Lubricating Oil for Replacement of R-22 Refrigerant**

REPLY BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This Reply Brief under 37 C.F.R. §41.41 is timely submitted in support of the Notice of Appeal filed December 9, 2009, appealing to the Board from the Final Office Action, mailed June 27, 2008 (Paper No. Mail Date 20080623), finally rejecting claims 1-10, 21-25, 27, 29-31, 33-35 and 37-40 of the above referenced application and in response to the Examiner's Answer mailed March 31, 2009. No new or non-admitted amendment or any new or non-admitted affidavit or other evidence is submitted with this Reply Brief.

(9) Grounds of Rejection

In response to Appellants' Appeal Brief, the Examiner's Answer (hereinafter also "the Answer") relies solely upon the teachings of Takigawa to render independent claims 1, 6, 21, and 22 obvious. The Answer maintains the position that Takigawa bears only one difference from the claimed refrigerant composition. Namely, the Answer contends Takigawa differs from the rejected claims in that it fails to teach the precise ratio of HFC-134a and HFC-125 refrigerant gases recited in the pending claims. The Answer goes on to erroneously conclude such a ratio is obvious in light of Takigawa. The only support for such conclusion is the conclusory statement that the precise ratio recited in the claims "amounts to routine optimization". No evidence is presented as to why Appellants' precise ratio amounts to routine optimization. In view of the present record, no such evidence is available.

Appellants agree that Takigawa fails to teach the claimed ratio of HFC-134a and HFC-125. Takigawa, however, also fails to teach or suggest a refrigerant composition where HFC-134a and HFC-125 are the only two refrigerant gases present. Taken in its entirety, Takigawa simply does not guide the skilled artisan to the refrigerant composition recited in claims 1, 6, 21, and 22. In order to reach the conclusion of obviousness, Takigawa must be viewed selectively, using the rejected claims as a blueprint.

To support an interpretation that Takigawa teaches a mixture in which HFC-134a and HFC-125 are the only two refrigerant gases, the Answer cites Takigawa, col. 1, lines 13+:

"This invention relates to a refrigerator oil and a fluid composition for a refrigerator, and in particular to a refrigerator oil and a fluid composition containing said oil for use in a refrigerator, the refrigerator oil comprising an alkyl benzene having a specific feature and being suited for use with an HFC refrigerant containing 1,1,1,2-tetrafluoroethane (HFC-134a) and/or pentafluoroethane (HFC-125)."

and col. 8, lines 29-31:

"There is no restriction as to the kind of HFC (hydrofluorocarbon) to be mixed with HFC-134a and/or HFC-125."

The Answer interprets the combination of these sentences to mean "that no additional HFC need be added, and that the disclosure reads on refrigerant compositions *consisting of* 40-60% [HFC-]134a and 60-40% of [HFC-]125." Answer, page 3, lines 13-15. This, however, is not what is recited in the pending claims. Moreover, isolating these two sentences from

Takigawa, the Answer selectively ignores what the whole of Takigawa teaches the skilled artisan. Takigawa does not teach a mixture of only HFC-134a and HFC-125, and Takigawa does not teach the ratio recited in the rejected claims.

For example, col. 1, lines 13+ disclose an "HFC refrigerant containing 1,1,1,2-tetrafluoroethane (HFC-134a) and/or pentafluoroethane (HFC-125)." (Emphasis added). This statement does not suggest compositions consisting of about 40-45% HFC-134a and about 55-60% of HFC-125 as recited in pending claims 1, 6, 21 and 22, let alone a refrigerant gas composition consisting of about 60% HFC-125 and about 40% HFC-134a (see claims 3, 8 and 23), or about 58% HFC-125 and about 42% HFC-134a (see claims 4, 9 and 24), or about 55% HFC-125 and about 45% HFC-134a.

In addition, when read in context, even the sentence used as the Answer's cornerstone (underlined below), does not suggest an HFC-134a/HFC-125-only mixture.

At col. 8, lines 29-46 Takigawa states:

"There is no restriction as to the kind of HFC (hydrofluorocarbon) to be mixed with HFC-134a and/or HFC-125. The HFC includes trifluoromethane (HFC-23), difluoromethane (HFC-32), 1,1,2,2-tetrafluoroethane (HFC-134), 1,1,1-trifluoroethane (HFC-143a) or 1,1-difluoroethane (HFC-152a).

Examples of the HFC-refrigerant containing 1,1,1,2-tetrafluoroethane (HFC-134a) and/or pentafluoroethane (HFC-125) that are useful in this invention are **HFC-134a alone, HFC-125 alone**, a mixture of HFC-134a/HFC-32 in a ratio of 60-80% by weight/40-20% by weight; a mixture of HFC-134a/HFC-32/HFC-125 in a ratio of 40-70% by weight/15-35% by weight/5-40% by weight, a mixture of HFC-125/HFC-32 in a ratio of 30-60% by weight/70-40% by weight, a mixture of HFC-125/HFC-143a in a ratio of 40-60 % by weight/60-40% by weight and a mixture of HFC-125/HFC-134a/HFC-143a in a ratio of 35-55% by weight/1-15% by weight/40-60% by weight.

Specific examples of the HFC refrigerant mixture are R404A (HFC-125/HFC-143a/HFC-134a in a ratio of 44% by weight/52% by weight/4% by weight), R4078C (HFC-32/HFC-125/HFC-134a in a ratio of 23% by weight/25% by weight/52% by weight), R410A (HFC-32/HFC-125 in a ratio of 45% by weight/55% by weight) and R507 (HFC125/HFC-143a in a ratio of 50% by weight/50% by weight."

(Emphasis added)

Interpreting the phrase "to be mixed with" in Takigawa as a teaching that "no additional HFC need be added" can only be interpreted as a deliberate misinterpretation of Takigawa. It certainly is not a reasonable interpretation of Takigawa. In fact, a plain English interpretation of

“to be mixed with” suggests additional HFCs are added. However, even if “to be mixed with” could mean no additional HFC need be added”, Takigawa suggests the exact opposite.

Takigawa generally describes its refrigerating machine oil is for use with alkane fluoride refrigerants. These refrigerants are described as

“alkane fluorides having 1 to 3 carbon atoms, preferably an alkane fluoride having 1 to 2 carbon atoms and containing 40% by weight or more of 1, 1, 1, 2-tetrafluoroethane (HFC-134a) and/or an alkane fluoride having preferably 1 to 2 carbon atoms and containing 20% by weight or more of pentafluoroethane (HFC-125).” (col. 8, lines 20+).

This teaching literally covers thousands of possible combinations of HFC refrigerant gases.

Directly after the cited paragraph, Takigawa identifies suitable HFC’s to be mixed with HFC-134a and/or HFC-125 and goes on to identify mixtures suitable for use with its specific lubricant (refrigerant oil). If used in the same composition, HFC-134a and HFC-125 are always joined by a third refrigerant gas, i.e. HFC-143a, HFC-32, and HFC-152a. Two of the refrigerants listed may be used alone, namely “HFC-134a alone” and “HFC-125 alone”. None of these mixtures contemplates an HFC-134a/HFC-125 mixture alone. Therefore, the Answer’s position that Takigawa suggests a composition where HFC-134a and HFC-125 are the only two refrigerant gases cannot be justified.

Takigawa offers no guidance on refrigerant mixtures like those claimed because Takigawa is only concerned with the lubricating refrigerator oil to be used. (See, generally, Col. 1, line 29 – Col. 2, line 3). Takigawa is not concerned at all with what the composition of the refrigerant gases should be other than that its lubricating oil be compatible with the refrigerant gases used. In particular, Takigawa is not at all concerned with identifying a refrigerant gas composition to be a substitute for chlorodifluoromethane (R-22), a CFC, not an HFC refrigerant gas. In fact, none of Takigawa’s six Evaluation Tests relate or refer to a refrigerant composition consisting of only HFC-134a and HFC-125.

While a reference is not limited to its particular embodiments and is available for all that it teaches, Takigawa as a whole simply does not teach any refrigerant composition in which the refrigerant gas components are a combination of only HFC-125 and HFC-134a, much less a refrigerant composition in which the refrigerant gases consist of about 40% to about 45% by

weight HFC-134a and about 55% to about 60% by weight HFC-125, as recited in the rejected claims.

At p. 4, the Answer, citing case law, states, "In the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists." This statement may be true where the only differences between an application and cited prior art are differences in ratios. Takigawa, however, does not teach a composition with only HFC-134a and HFC-125. Thus, any ratios mentioned by Takigawa may refer to compositions containing HFC-134a and/or HFC-125 but do not refer to compositions containing only HFC-134a and HFC-125. Even if Takigawa is considered to teach a composition with only HFC-134a and HFC-125, a *prima facie* case of obviousness is rebuttable and has been rebutted by Appellants, as described below.

(10) Response to Argument

2) In responding to Appellants' Appeal Brief arguments, the Answer incorrectly states, "Appellant argues that not every limitation is taught in the reference. This is not persuasive because the rejection was made under 103 rather than 102." The Answer incorrectly implies that a prior art reference need not teach every claimed feature for a rejection under 35 U.S.C. 103(a). Appellants respectfully disagree. It is well settled that "obviousness requires a suggestion of all limitations in a claim." *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) (*citing In re Royka*, 490 F.2d 981, 985 (CCPA 1974)) (emphasis added). At §2143.03, the MPEP requires the "consideration" of every claim feature in an obviousness determination. To render any claim unpatentable the Office must do more than merely "consider" each and every feature of a claim. The asserted prior art must also teach or suggest *each and every claim feature*. See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (emphasis added) (to establish *prima facie* obviousness of a claimed invention, all the claim features must be taught or suggested by the prior art).

The pending independent claims recite a refrigerant gas composition consisting of about 40% to about 45% tetrafluoroethane (HFC-134a) and about 55% to about 60% pentafluoroethane (HFC-125). Besides its failure to teach a refrigerant gas composition "consisting of" these two refrigerant gases to the exclusion of other refrigerant gases, Takigawa also fails to teach that tetrafluoroethane should be present in an amount no less than about 40% and in an amount no greater than about 45%, and further fails to teach that pentafluoroethane

should be present in an amount of no less than about 55% and no more than about 60%. Takigawa further fails to teach the 60/40, 58/42 and 55/45 compositions of the dependent claims. Neither the Answer nor the Final Rejection make any effort to present any *prima facie* evidence of a teaching of these upper and lower limits for these two selected refrigerant gases recited in the pending claims because there is no such teaching. Since Takigawa is concerned only with identifying its alkyl benzene refrigerator oil having a specific property, Takigawa presents no teaching of how to select a refrigerant gas composition to be a substitute for the CFC, R-22, among the potentially thousands of combinations of alkane fluoride refrigerant gases it discusses.

3) Appellants' Appeal Brief argues there is no teaching in Takigawa to support a modification to result in the claimed refrigerant composition. In response, the Answer incorrectly states,

"No modification of the reference need be made: The simplest binary composition fairly taught by the reference in the most preferred percentages, consists of 40% or more of each tetrafluoroethane and pentafluoroethane."

An obviousness rejection is an inherent acknowledgement that the primary reference, here Takigawa, relied upon for the rejection fails to teach each and every feature recited in the rejected claims. An obviousness rejection necessarily requires either a combination of one or more references or, in the case of a single-reference obviousness rejection, requires the reference to be modified in order to meet each feature of the claimed refrigerant composition. Here no rejection is presented under Section 102 that Takigawa anticipates the rejected claims. Thus, the single cited reference, Takigawa, must be modified in order to meet the features recited in the rejected claims, especially considering Takigawa never discloses either a binary composition consisting of tetrafluoroethane (HFC-134a) and pentafluoroethane (HFC-125) to the exclusion of other refrigerant gases or the specific percentages of these two refrigerant gases recited in the pending claims.

Appellants maintain the position that nothing in Takigawa would lead the skilled artisan to the refrigerant composition recited in the rejected claims. Neither the Answer nor the Final Rejection present any *prima facie* evidence of how or why one skilled in the art would modify Takigawa to result in the refrigerant gas composition recited in the pending claims.

4) In response to Appellants' Appeal Brief arguments that Takigawa looks to solve a different problem than that addressed by Appellants, the Answer incorrectly attempts to simplify

the respective problems solved by Takigawa and by Appellants to merely generating refrigeration. As noted above, this is not the purpose of Takigawa. Appellants' raised this issue to demonstrate that a skilled artisan would not, by nature of the problem addressed in Takigawa, glean any guidance to choose a binary gas composition consisting only of about 60% to about 55% HFC-125 and of about 40% to about 45% HFC 134a as a substitute for the CFC, R-22. Takigawa is concerned with an alkyl benzene having a specific property for use as a refrigerator oil with HFC refrigerants. To the contrary, the Appellants' recited refrigerant composition results from an attempt to produce a refrigerant composition for high-temperature application suitable to replace the specific CFC refrigerant chlorodifluoromethane, R-22. (Declaration of Kenneth Ponder, paragraphs 3-6, Exhibit A of Appellants' Evidence Appendix). There is no consideration at all in Takigawa of determining a refrigerant gas composition to be a substitute for CFC refrigerant gas, let alone the CFC R-22.

The Answer at pages 6-7 admits that Takigawa "is not drawn specifically to either of high- or medium-temperature refrigeration or to low-temperature refrigeration", but states "Nor are appellants' claims." The Answer misses the point of contrasting the problems to be solved. While not controlling, the problem addressed by Takigawa does not illuminate a route to Appellants' recited refrigerant gas composition. The problems to be solved by Takigawa and Appellants are different, and neither is aimed at simply "successfully generat[ing] refrigeration", as erroneously set forth in the Answer. Simply generating refrigeration is not the goal of either Takigawa or Appellants. Regardless, the fact remains that Takigawa does not attempt to solve the same problem as Appellants and does not intimate any reason to the skilled artisan to use only the refrigerant gases HFC-134a and HFC-125 in the proportions claimed as a replacement for the CFC R-22.

In fact, if "successfully generat[ing] refrigeration" were merely the goal there would be no need for more than one refrigerant gas composition, as one refrigerant gas composition would be suitable to meet such a goal and only one composition would be needed to meet such a goal. Further, simply "successfully generat[ing] refrigeration" as an objective is contradicted by the large number of refrigerant gas compositions that carry ASHRAE designations (see, e.g. Appellants' Evidence Appendix, Exhibit C, ANSI/ASHRAE Addendum u to ANSI/ASHRAE Standard 34-2004, pages 27-30). ASHRAE, the American Society of Heating, Refrigerating, and Air-Conditioning Engineers, is the international industry organization and standards creating body for the heating, ventilating, air conditioning and refrigerating industries.

Such an overstated objective is further contradicted by the Examiner's own concessions at page 7 of the Answer "that behavior profiles of various refrigeration mixtures made according to the reference [Takigawa] will be vastly different." If, as conceded, the behavior profiles will be vastly different, then one cannot expect that all such mixtures will successfully generate refrigeration in any and all applications, let alone as a replacement for the CFC R-22.

The Examiner further contradicts himself in the Answer at page 8 when noting Appellants' argument that there is no teaching in Takigawa that different ratios of pentafluoroethane to tetrafluoroethane can result in compositions for different temperature applications and raising the question "Why else would one make differing compositions of the same gases?" First, where does the recognition of the problem creating different ratios for different temperature applications come from? It is clear the Examiner does not find it in Takigawa. Instead, the Examiner's interpretation of the objective in Takigawa is "successfully generat[ing] refrigeration", which objective would teach away from creating different ratios for different temperature applications as only one ratio would be needed to merely successfully generate refrigeration.

If one were to follow the logic of the rejection of the present claims as presented in the Answer, no patent claim to a refrigerant composition combining two or more known refrigerant gases could ever be allowed since all such combinations are aimed at simply generating refrigeration. Such logic is contradicted by the numbers of patents the US PTO has allowed and issued to combinations of known refrigerant gases, including Appellants' US Patent no. 7,320,763 which patent claims a combination consisting of HFC-125 and HFC-134a. Such logic is further contradicted by the ASHRAE evidence showing that the presence or absence of even a small amount of a refrigerant gas is considered to materially affect the basic properties of a given refrigerant gas composition resulting in one refrigerant gas composition having different properties than another refrigerant gas composition, even consisting of the same gases, and resulting in the issuance by ASHRAE of a new industry designation number. As stated in the Second Declaration of Andy Gbur, a member of the ASHRAE Standard Project Committee 34 from 2002 to 2007 that issues ASHRAE standard designation numbers for refrigerant compositions (Appellants' Evidence Appendix, Exhibit B), paragraph 6:

ASHRAE recognizes that blends of refrigerant gases having the same components in different proportions can produce refrigerant blend compositions having different refrigerant properties as typically reflected by differences in temperature/pressure profiles of the refrigerant blend compositions. ASHRAE