

FORM PTO-1696  
(Rev. 6-93)  
OMB No. 0651-0011 (exp. 4/94)

# RECORDATION FORM COVER SHEET PATENTS ONLY

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):  
Gregory P. Muldowney  
Michael R. Chuba

2. Name and address of receiving party(ies)

Name: ExxonMobil Research & Engineering Co.  
Internal Address: Law Department

Additional name(s) of conveying party(ies) attached?  Yes  No

Street Address: 1545 Route 22 East, P. O. Box 900

3. Nature of conveyance:

City: Annandale State: NJ ZIP: 08801

- Assignment  Merger
- Security Assignment  Change of Name
- Other:

**Sent via Facsimile on: August 14, 2003  
TO 703-306-5995 by Karen K. Simpson**

**Return Facsimile Phone Number: (703) 846-7799**

**Family Number: P2003J047**

Execution Date(s): August 4, 10, 2003

Additional name(s) & address(es) attached?  Yes  No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

B. Patent No.(s)

USSN 10/439,960 f. 05/16/2003

Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:

6. Total number of applications and patents involved:

Name: ExxonMobil Research & Engineering Company

7. Total fee (37 CFR 3.41).....\$40.00

Internal Address: Law Department

Enclosed

Authorized to be charged to deposit account

Street Address: 1545 Route 22 East

8. Deposit account number:

P.O. Box 900

05-1330

City: Annandale State: NJ ZIP: 08801

(Attach duplicate copy of this page if paying by deposit account)

**DO NOT USE THIS SPACE**

9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Malcolm D. Keen

14 Aug 03

Name of Person Signing

Signature

Date

Pursuant to 37 CFR 1.34(a)

Total number of pages including cover sheet, attachments, and document:

**3**



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PATENT TRADEMARK OFFICE

Mail documents to be recorded with required coversheet information to:  
Commissioner for Patents, Box Assignments, Washington, D.C. 20231 - Facsimile No. 1-703-306-5995

GH \$40.00 061330 10439960

**INVENTOR or INVENTORS:**

Gregory P. Muldowney

Michael R. Chuba

For good and valuable consideration, the undersigned person(s) named above, herein referred to as UNDERSIGNED, hereby agree(s) as follows:

1) UNDERSIGNED hereby assign(s) to ExxonMobil Research and Engineering Company (formerly Exxon Research and Engineering Company), a corporation of Delaware, its successors, legal representatives and assigns, herein referred to collectively as ASSIGNEE, the entire right, title and interest, for the United States and all foreign countries, in and to UNDERSIGNED's invention or improvement and to all patent applications and patents covering same which is described in a patent application entitled

Multiphase Mixing Device with Improved Quench Injection for Inducing Rotational Flow

said application having been executed on the 4th day(s) of August 2003, and being further identified as Case Number P2003J047; and all rights of priority created by said application under provisions of international conventions or treaties.

2) UNDERSIGNED agree(s) upon the request of ASSIGNEE to execute any and all applications for and documents relating to obtaining patents and the prosecution thereof for said invention or improvement, and any continuations of such applications or substitutes therefor or registrations thereof, and any specific separate assignments of any of the above required for recording in the United States Patent and Trademark Office and any foreign patent office that ASSIGNEE may deem necessary or expedient.

3) UNDERSIGNED agree(s) that in the event of any application based on said assigned invention or improvement, or patent issued thereon, or any reissu or application for the reissu thereof, becoming involved in priority of invention proceedings, UNDERSIGNED will cooperate with ASSIGNEE to the best of the ability of UNDERSIGNED in the matter of preparing and executing all documents and giving and producing evidence in support thereof.

4) UNDERSIGNED agree(s) to perform upon ASSIGNEE's request any and all affirmative acts to obtain United States and foreign patents covering said invention or improvement and to vest all rights therein hereby conveyed to ASSIGNEE, as fully and as entirely as the same would have been held and enjoyed by UNDERSIGNED if this assignment and sale had not been made.

5) UNDERSIGNED hereby authorize(s) ASSIGNEE to insert in this instrument the date(s) on which UNDERSIGNED executed the Declaration for the above-referenced patent application.

IN WITNESS WHEREOF, this assignment has been executed by UNDERSIGNED on the date opposite UNDERSIGNED's NAME.

Date 8/4/03 Inventor Gregory P. Muldowney (LS) Witness Cosmi L...  
Gregory P. Muldowney

Date \_\_\_\_\_ Inventor \_\_\_\_\_ (LS) Witness \_\_\_\_\_  
Michael R. Chuba

Date \_\_\_\_\_ Inventor \_\_\_\_\_ (LS) Witness \_\_\_\_\_

Date \_\_\_\_\_ Inventor \_\_\_\_\_ (LS) Witness \_\_\_\_\_

Date \_\_\_\_\_ Inventor \_\_\_\_\_ (LS) Witness \_\_\_\_\_

Date \_\_\_\_\_ Inventor \_\_\_\_\_ (LS) Witness \_\_\_\_\_



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PATENT TRADEMARK OFFICE

Family Number: P2003 J047

**INVENTOR or INVENTORS:**

Gregory P. Muldowney

Michael R. Chuba

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1) UNDERSIGNED hereby assign(s) to ExxonMobil Research and Engineering Company (formerly Exxon Research and Engineering Company), a corporation of Delaware, its successors, legal representatives and assigns, herein referred to collectively as ASSIGNEE, the entire right, title and interest, for the United States and all foreign countries, in and to UNDERSIGNED's invention or improvement and to all patent applications and patents covering same which is described in a patent application entitled

**Multiphase Mixing Device with Improved Quench Injection for Inducing Rotational Flow**

said application having been executed on the 10th day(s) of August 2003, and being further identified as Case Number P2003J047; and all rights of priority created by said application under provisions of international conventions or treaties.

2) UNDERSIGNED agree(s) upon the request of ASSIGNEE to execute any and all applications for and documents relating to obtaining patents and the prosecution thereof for said invention or improvement, and any continuations of such applications or substitutes therefor or registrations thereof, and any specific separate assignments of any of the above required for recording in the United States Patent and Trademark Office and any foreign patent office that ASSIGNEE may deem necessary or expedient.

3) UNDERSIGNED agree(s) that in the event of any application based on said assigned invention or improvement, or patent issued thereon, or any reissue or application for the reissue thereof, becoming involved in priority of invention proceedings, UNDERSIGNED will cooperate with ASSIGNEE to the best of the ability of UNDERSIGNED in the matter of preparing and executing all documents and giving and producing evidence in support thereof.

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IN WITNESS WHEREOF, this assignment has been executed by UNDERSIGNED on the date opposite UNDERSIGNED's NAME.

Date \_\_\_\_\_ Inventor \_\_\_\_\_ (LS)  
Gregory P. Muldowney

Witness \_\_\_\_\_

Date 8/10/2003 Inventor Michael R. Chuba (LS)

Witness Michael R. Chuba

Date \_\_\_\_\_ Inventor \_\_\_\_\_ (LS)

Witness \_\_\_\_\_

Date \_\_\_\_\_ Inventor \_\_\_\_\_ (LS)

Witness \_\_\_\_\_

Date \_\_\_\_\_ Inventor \_\_\_\_\_ (LS)

Witness \_\_\_\_\_

Date \_\_\_\_\_ Inventor \_\_\_\_\_ (LS)

Witness \_\_\_\_\_



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