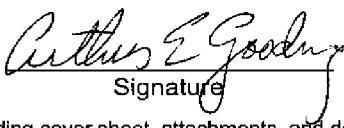


Form PTO-1595 (Rev. 10/02) OMB No. 0651-0027 (exp. 6/30/2005) Tab settings ⇌ ⇌ ⇌ ▼ ▼ ▼ ▼ ▼ ▼ ▼		RECORDATION FORM COVER SHEET PATENTS ONLY		U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office	
To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.					
1. Name of conveying party(ies): HAYIM ABREVAYA JOEL T. WALENGA MICHAEL A. SCHULTZ ANIL R. OROSKAR Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			2. Name and address of receiving party(ies) Name: UOP LLC Internal Address: _____ _____ Street Address: 25 EAST ALGONQUIN ROAD P.O. BOX 5017 City: DES PLAINES State: IL Zip: 60017-5017 Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
3. Nature of conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other _____ Execution Date: 12/10/02, 12/10/02, 12/11/02, 12/10/02					
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) 10/317,261 B. Patent No.(s) _____ Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
5. Name and address of party to whom correspondence concerning document should be mailed: Name: UOP LLC Internal Address: ATTN: JOHN G. TOLOMEI _____ Street Address: 25 EAST ALGONQUIN ROAD P.O. BOX 5017 City: DES PLAINES State: IL Zip: 60017-5017			6. Total number of applications and patents involved: 1 7. Total fee (37 CFR 3.41).....\$ 40.00 <input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account: 8. Deposit account number: 21-0600		
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9. Signature. ARTHUR E. GOODING Name of Person Signing  Signature DECEMBER 31, 2002 Date Total number of pages including cover sheet, attachments, and documents: 5					

Mail documents to be recorded with required cover sheet information to:
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Washington, D.C. 20231

700022008

PATENT
REEL: 013321 FRAME: 0809

ASSIGNMENT

☐ U.S. Provisional Application☒ U.S. Utility Patent Application

Attorney Docket No. 104144

WHEREAS, **HAYIM ABREVAYA**, a citizen of UNITED STATES, residing in the City of WILMETTE, in the County of COOK and State of ILLINOIS, **JOEL T. WALENGA**, a citizen of UNITED STATES, residing in the City of ARLINGTON HEIGHTS, in the County of COOK and State of ILLINOIS, **MICHAEL A. SCHULTZ**, a citizen of UNITED STATES, residing in the City of CHICAGO, in the County of COOK and State of ILLINOIS, and **ANIL R. OROSKAR**, a citizen of UNITED STATES, residing in the City of OAKBROOK, in the County of DUPAGE and State of ILLINOIS, and hereinafter referred to as "the inventors" have invented certain new and useful improvements in

RISER REACTOR SYSTEM FOR HYDROCARBON CRACKING

WHEREAS, the inventors hereby authorize and request their attorney/agent of record to have inserted on each page (where indicated below) the filing date and application number of said application when known; and

WHEREAS, UOP LLC, a company organized and existing under the laws of the State of Delaware having a principal place of business at Des Plaines, Illinois, is desirous of acquiring an interest in and to said application, the inventions disclosed therein, and the Letters Patent of the United States that may be issued thereon.

NOW, THEREFORE in consideration of the sum of One Dollar (\$1.00) and other good and valuable considerations the receipt of which is hereby acknowledged, said inventors do hereby transfer, set over and assign unto said UOP LLC, its successors and assigns, the entire right, title and interest in, to and under said application; the invention(s) covered thereby; any and all resultant patent or patents thereon; any renewals, reissues, extensions, reexaminations, substitutions, continuations, or divisions thereof, and all foreign rights thereunder including all rights to claim any priority in and to the inventions disclosed therein. Inventors hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent to said UOP LLC, its successors and assigns.

IN WITNESS WHEREOF, the inventors have set their signatures hereunto on the date specified below.

Application No. 01317 261 filed 12-11-02

Atty. Docket # 104144

PATENT
(Rev. 03-21-00)
REEL: 013321 FRAME: 0810

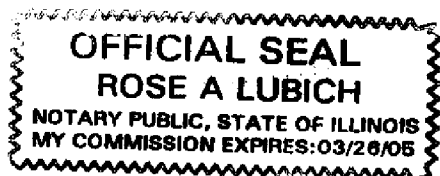
Page 2 of 2

Hayim Abrevaya 10 December, 2002 10 December 2002
HAYIM ABREVAYA Date Date Executed
Application for Letters Patent

State of Illinois
County of Cook

Before me, on this day, 12-10-02, personally appeared **HAYIM ABREVAYA**, to me personally known, who duly acknowledged the foregoing instrument to be his/her free and voluntary act and deed for the purposes therein expressed.

SEAL

Rose A Lubich

Notary Public

Joel T. Walenga
JOEL T. WALENGA

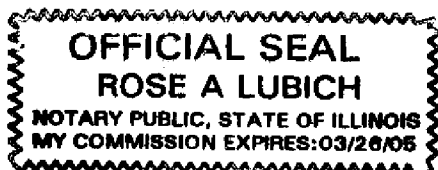
12/10/02
Date

12/10/02
Date Executed
Application for Letters Patent

State of Illinois
County of Cook

Before me, on this day, 12-10-02, personally appeared **JOEL T. WALENGA**, to me personally known, who duly acknowledged the foregoing instrument to be his/her free and voluntary act and deed for the purposes therein expressed.

SEAL

Rose A Lubich

Notary Public

Application No. 101 317 261 filed 12-11-02

Atty. Docket # 104144

PATENT
(Rev. 03-21-00)
REEL: 013321 FRAME: 0811

Page 3 of 2

Michael A. Schultz
MICHAEL A. SCHULTZ

12/11/02
Date

12/11/02
Date Executed
Application for Letters Patent

State of Illinois
County of Cook

Before me, on this day, 12/11/02, personally appeared **MICHAEL A. SCHULTZ**, to me personally known, who duly acknowledged the foregoing instrument to be his/her free and voluntary act and deed for the purposes therein expressed.

SEAL



Marie G. Cooper
Notary Public

Anil R. Oroskar
ANIL R. OROSKAR

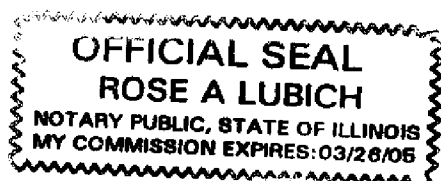
12/10/02
Date

Dec. 10th 2002
Date Executed
Application for Letters Patent

State of Illinois
County of Cook

Before me, on this day, 12-10-02, personally appeared **ANIL R. OROSKAR**, to me personally known, who duly acknowledged the foregoing instrument to be his/her free and voluntary act and deed for the purposes therein expressed.

SEAL



Rose A. Lubich
Notary Public

101 317 261

Application No. _____ filed 12-11-02

Atty. Docket # 104144

RECORDED: 12/31/2002

PATENT
(Rev. 03-21-00)
REEL: 013321 FRAME: 0812