

PATENT ASSIGNMENT

Electronic Version v1.1  
Stylesheet Version v1.1

SUBMISSION TYPE:

NEW ASSIGNMENT

NATURE OF CONVEYANCE:

ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Narasimha Mangadoddy	03/12/2010
Pradip Kumar Banerjee	03/16/2010
Debashish Bhattacharjee	03/16/2010
T. Mukherjee	03/16/2010
Peter Holtham	03/22/2010
Matthew Brennan	03/22/2010

RECEIVING PARTY DATA

Name:	Tata Steel Limited
Street Address:	Research and Development Division
City:	Jamshedpur
State/Country:	INDIA
Postal Code:	831 001

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12673920

CORRESPONDENCE DATA

Fax Number: (412)945-5933

*Correspondence will be sent via US Mail when the fax attempt is unsuccessful.*

Phone: 412-471-8815

Email: assignments@webblaw.com

Correspondent Name: THE WEBB LAW FIRM, P.C.

Address Line 1: 700 KOPPERS BUILDING

Address Line 2: 436 SEVENTH AVENUE

Address Line 4: PITTSBURGH, PENNSYLVANIA 15219

ATTORNEY DOCKET NUMBER:

4544-100448

OP \$40.00 12673920

501284432

PATENT  
REEL: 024954 FRAME: 0470

NAME OF SUBMITTER:

William H. Logsdon Reg. No. 22,132

Total Attachments: 5

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**RECORDATION FORM COVER SHEET  
PATENTS ONLY**

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

**1. Name of conveying party(ies)**

Narasimha Mangadoddy Peter Holtham  
Pradip Kumar Banerjee Matthew Brennan  
Debashish Bhattacharjee  
T. Mukherjee

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

**3. Nature of conveyance/Execution Date(s):**

Execution Date(s) March 12, 2010; March 16, 2010; March 22, 2010

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Joint Research Agreement  
☐ Government Interest Assignment  
☐ Executive Order 9424, Confirmatory License  
☐ Other \_\_\_\_\_

**2. Name and address of receiving party(ies)**

Name: TATA STEEL LIMITED

Internal Address: \_\_\_\_\_

Street Address: Research and Development Division

City: Jamshedpur

State: \_\_\_\_\_

Country: INDIA Zip: 831 001

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

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

☐ This document is being filed together with a new application.

A. Patent Application No.(s)  
12/673,920

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: William H. Logsdon

Internal Address: The Webb Law Firm

Street Address: 436 Seventh Avenue  
700 Koppers Building

City: Pittsburgh

State: PA Zip: 15219

Phone Number: 412-471-8815

Fax Number: 412-945-5933

Email Address: assignments@webblaw.com

**6. Total number of applications and patents involved: 1**

**7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00**

- ☒ Authorized to be charged by credit card  
☐ Authorized to be charged to deposit account  
☐ Enclosed  
☐ None required (government interest not affecting title)

**8. Payment Information**

a. Credit Card Last 4 Numbers 4775  
Expiration Date 05/2012

b. Deposit Account Number 23-0650

Authorized User Name \_\_\_\_\_

**9. Signature:**

William H. Logsdon  
Signature

September 8, 2010  
Date

William H. Logsdon, Registration No. 22,132  
Name of Person Signing

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

5

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

Doc. No.

**PATENT  
REEL: 024954 FRAME: 0472**

INTERNATIONAL  
Application No. 12/673,920  
Attorney Docket No. 4544-100448

ASSIGNMENT

WHEREAS, as a below named inventor, I have invented certain new and useful improvements in

CYCLONE FOR DENSE MEIDUM SEPARATION

(Invention Title)

☐ for which I have this day executed an application for a United States Patent (hereinafter "said application").

AND/OR

☒ for which an application for a United States Patent was filed on 02/17/2010 (mm/dd/yyyy) and bears Application Number 12/673,920 (hereinafter "said application").

AND/OR

☒ for which an international patent application was filed under the Patent Cooperation Treaty on 12/18/2007 (mm/dd/yyyy), bearing Application No. PCT/IN2007/00584 (hereinafter "said application").

AND, WHEREAS, **Tata Steel Limited**, a corporation of **INDIA**, having a place of business at **Research and Development Division, Jamshedpur 831 001**, hereinafter called the "assignee", is desirous of acquiring the entire right, title, and interest in and to said application and the inventions and improvements therein disclosed.

NOW, THEREFORE, for good and valuable consideration paid to me by said assignee, the receipt of which is hereby acknowledged, I as the inventor or as one of the inventors, hereinafter the assignor(s), do hereby assign, sell and transfer unto said assignee the full and exclusive right, title and interest in and to said application and the inventions and improvements therein disclosed for the United States and all foreign countries and any Letters Patent which may issue therefor in the United States and all foreign countries and all divisions, reissues, continuations, continuations-in-part, renewals and/or extensions thereof. Such assignment extends to the full ends of the terms of these applications and patents as fully and entirely as the same would have been held and enjoyed by me had this Assignment not been made.

I covenant that I am the lawful owner(s) of said application, inventions and improvements, that the same are unencumbered, that no license has been granted to make, use or vend the said inventions or improvements or any of them, and that I have the full right to make

Application No. 12/673,920 INTERNATIONAL  
Attorney Docket No. 4544-100-148

executors, administrators and/or assigns, and shall inure to the benefit of the heirs, executors, administrators, successors and/or assigns, as the case may be, of said assignee.

1. FULL NAME OF ASSIGNOR:  
Narasimha MANGADODDY

RESIDENCE:  
Jamshedpur, INDIA

EXECUTED this 12 day of March, 2010

Narasimha  
SIGNATURE

WITNESS:

B.K. Bhuyan  
(B.K. Bhuyan)

2. FULL NAME OF ASSIGNOR:  
Pradip Kumar BANERJEE

RESIDENCE:  
Jamshedpur, INDIA

EXECUTED this 16 day of March, 2010

Pradip Kumar  
SIGNATURE

WITNESS:

B.K. Bhuyan  
B.K. Bhuyan

INTERNATIONAL  
Application No. 12/673,920  
Attorney Docket No. 4544-100448

✓ 3. FULL NAME OF ASSIGNOR:  
Debashish BHATTACHARJEE

RESIDENCE:  
Jamshedpur, INDIA

EXECUTED this 16 day of March, 2010

✓ *Debashish Bhattacharjee*

SIGNATURE

WITNESS:

*Vhyh*

(B. K. Bhargava)

✓ 4. FULL NAME OF ASSIGNOR:  
T. MUKHERJEE

RESIDENCE:  
Jamshedpur, INDIA

EXECUTED this 16 day of March, 2010

✓ *T. Mukherjee*

SIGNATURE

WITNESS:

*Vhyh*

(B. C. Bhargava)

5. FULL NAME OF ASSIGNOR:  
Peter HOLTHAM

RESIDENCE:  
Brisbane, AUSTRALIA

*P. A. Holtham*

22 March 2010

R. Chandramohan

*[Signature]*

22/3/2010

PATENT

REEL: 024954 FRAME: 0475

INTERNATIONAL  
Application No. 12/673,920  
Attorney Docket No. 4544-100448

6. FULL NAME OF ASSIGNOR:  
Matthew BRENNAN

RESIDENCE: Brisbane, AUSTRAL

EXECUTED this 22 day of March, 2010

Math Brennan  
SIGNATURE

WITNESS:

R. CHANDRAMOHAN

[Signature]  
22/3/2010