

5.17.06

Handwritten number: 581140

10/579858

05-31-2006

IAF9 Rec'd PCT/PTO 17 MAY 2006

Form PTO-1595 (Rev. 08/05)
OMB No. 0651-0027 (exp. 6/06)



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PATENTS ONLY

ER SHEET

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)
Johan L. Richard; Lawrence Heaslip;
Dong Xu ; James D. Dorricott

2. Name and address of receiving party(ies)
Name: Vesuvius Crucible Company
Internal Address: _____

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

3. Nature of conveyance/Execution Date(s):
Execution Date(s) November 16, 2004
 Assignment Merger
 Security Agreement Change of Name
 Joint Research Agreement
 Government Interest Assignment
 Executive Order 9424, Confirmatory License
 Other _____

Street Address: 103 Foulk Road
City: Wilmington
State: Delaware
Country: USA Zip: 19803
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)
05/26/2006 GFREY1 00000084 220281 10579858
04 FC:8021 40.00 DA

B. Patent No.(s)

Additional numbers attached? Yes No

5. Name and address to whom correspondence concerning document should be mailed:
Name: Robert S. Klemz, Jr.
Internal Address: _____
Street Address: 250 Park West Drive
City: Pittsburgh
State: PA Zip: 15275
Phone Number: 412-429-1800
Fax Number: 412-257-7252
Email Address: _____

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 _____
Expiration Date _____
b. Deposit Account Number 220281
Authorized User Name VESUVIUS RESEARCH

9. Signature:
Signature

May 16, 2006
Date

Robert S. Klemz, Jr. Reg. No. 46305
Name of Person Signing

Total number of pages including cover sheet, attachments, and documents: 3

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

Docket No.: 1463 PCT

INVENTION/PATENT APPLICATION ASSIGNMENT
FROM INVENTORS TO COMPANY

WHEREAS WE,

Johan L. Richaud of Dundas, Ontario, Canada, a French Citizen residing at 6 Waterwheel Cres., Dundas, Ontario, CANADA, L9H-7B6;

Dong Xu of Mississauga, Ontario, Canada, a Chinese Citizen residing at 3016 Hawktail Crescent, Mississauga, Ontario, CANADA, L5M-6W3;

Lawrence J. Heaslip of Burlington, Ontario, Canada, a Canadian Citizen residing at 4375 Spruce Avenue, Burlington, Ontario, CANADA L7L-1L7; and

James D. Dorricott of Burlington, Ontario, Canada, a Canadian Citizen residing at 2093 Simcoe Drive, Burlington, Ontario, CANADA L7M-4E8; have made a certain new and useful invention as set forth in an application for United States Letters Patent, entitled:

MULTI-OUTLET CASTING NOZZLE

and is filed herewith, and claims priority to U.S. Provisional Patent Application No. 60/520,613 filed on November 17, 2003;

AND WHEREAS, Vesuvius Crucible Company ("Vesuvius"), a corporation of the State of Delaware, having as address of 103 Foulk Road, Suite 202, Wilmington, DE 19803, U.S.A., hereinafter referred to as assignee, is desirous of acquiring the entire right, title and interest in and to said invention and in and to any and all Letters Patent of the United States and foreign countries that may be obtained therefor;

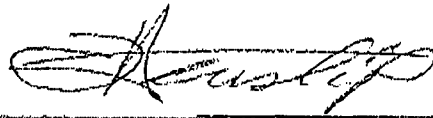
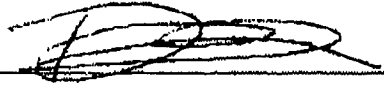

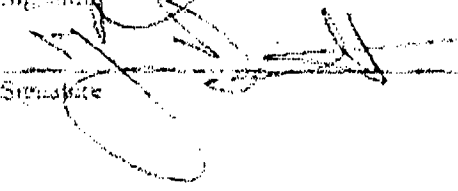
NOW, THEREFORE, for good and valuable consideration, the receipt for and sufficiency of which is hereby acknowledged, We do hereby sell, assign, transfer and set over unto said assignee, its legal representatives, successors, and assigns, the entire right, title and interest in and to said invention as set forth in the above-mentioned application, including any continuations, continuations-in-part, divisions, reissues, re-examinations or extensions thereof, and in and to any and all patents of the United States and foreign countries that may be issued for said invention;

UPON SAID CONSIDERATIONS, We hereby agree with the said assignee that We will not execute any writing or do any act whatsoever conflicting with these presents, and that We will, at any time upon request, without further or additional consideration but at the expense of said assignee, execute such additional assignments and other writings and do such additional acts as said assignee may deem necessary or desirable to perfect the assignee's enjoyment of this grant, and render all necessary assistance in making application for and obtaining original, divisional, continuations, continuations-in-part, reexamined, reissued, or extended Letters Patent of the United States or of any and all foreign countries on said invention, and in enforcing any rights or

Docket No.: 1463 US

chooses in action accruing as a result of such applications or patents, by giving testimony in any proceedings or transactions involving such applications or patents, and by executing preliminary statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of the assigns and legal representatives of assignor and assignee;

AND We request the Commissioner of Patents and Trademarks to issue any Letters Patent of the United States that may be issued for said invention to said assignee, its legal representatives, successors or assigns, as the sole owner of the entire right, title and interest in and to said patent and the invention covered thereby.

<p><u>Nov. 16, 2004</u> Date</p> <p><u>Nov 16, 2004</u> Date</p> <p><u>November 16, 2004</u> Date</p> <p><u>November 16, 2004</u> Date</p>	<p><u></u> Signature</p> <p><u></u> Signature</p> <p><u></u> Signature</p> <p><u></u> Signature</p>
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