

06-25-2001



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**RECORDATION FORM COVER SHEET
PATENTS ONLY**

06/11/01

JC971 U.S. PTO
09/878584
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TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies).

Submission Type

- New
- Resubmission (Non-Recordation)
Document ID#
- Correction of PTO Error
Reel # Frame #
- Corrective Document
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Conveyance Type

- Assignment Security Agreement
 - License Change of Name
 - Merger Other
- U.S. Government**
(For Use ONLY by U.S. Government Agencies)
- Departmental File Secret File

Conveying Party(ies)

- Mark if additional names of conveying parties attached
- Name (line 1) Execution Date
- Name (line 2)

Second Party

- Name (line 1) Execution Date
- Name (line 2)

09/878584

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- If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

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- Name (line 2)
- Address (line 1)
- Address (line 2)
- Address (line 3)
- City State/Country Zip Code

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Enter for the first Receiving Party only.

- Name
- Address (line 1)
- Address (line 2)
- Address (line 3)
- Address (line 4)

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Pages Enter the total number of pages of the attached conveyance document including any attachments. #

Application Number(s) or Patent Number(s)

Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. Month Day Year

Patent Cooperation Treaty (PCT)

Enter PCT application number only if a U.S. Application Number has not been assigned.

PCT <input type="text"/>	PCT <input type="text"/>	PCT <input type="text"/>
PCT <input type="text"/>	PCT <input type="text"/>	PCT <input type="text"/>

Number of Properties

Enter the total number of properties involved. #

Fee Amount

Fee Amount for Properties Listed (37 CFR 3.41): \$

Method of Payment:
Deposit Account

Enclosed Deposit Account

(Enter for payment by deposit account or if additional fees can be charged to the account.)

Deposit Account Number: #

Authorization to charge additional fees: Yes No

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. Charges to deposit account are authorized, as indicated herein.

James R. Williams

8 June 2001

Name of Person Signing

Signature

Date

RECORDATION FORM COVER SHEET CONTINUATION PATENTS ONLY

Conveying Party(ies)

Mark if additional names of conveying parties attached

Enter additional Conveying Parties

Name (line 1) Dorricott, James D.

Execution Date
Month Day Year
06/01/01

Name (line 2)

Execution Date
Month Day Year

Name (line 1)

Execution Date
Month Day Year

Name (line 2)

Execution Date
Month Day Year

Name (line 1)

Execution Date
Month Day Year

Name (line 2)

Receiving Party(ies)

Mark if additional names of receiving parties attached

Enter additional Receiving Party(ies)

Name (line 1)

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Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3) City State/Country Zip Code

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Application Number(s) or Patent Number(s)

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Patent Application Number(s)

Patent Number(s)

U.S. PTO
09/878584
06/11/01

PATENT APPLICATION ASSIGNMENT
FROM INVENTORS TO VESUVIUS CRUCIBLE COMPANY

Dong Xu, a citizen of China, residing in Canada at 555 West Mall, Apt. 1502, Etobicoke, Ontario M9C-1G8;

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

James D. Dorricott, a citizen of Canada, residing in Canada at 2093 Simcoe Drive, Burlington, Ontario L7M-4E8 (collectively "We")

have made a certain new and useful invention as set forth in an application for United States Letters Patent filed herewith entitled:

**CONTINUOUS CASTING NOZZLE WITH PRESSURE
MODULATOR FOR IMPROVED LIQUID METAL FLOW REGULATION.**

Vesuvius Crucible Company, a corporation of the State of Delaware having an office at 103 Foulk Road, Suite 32, Wilmington, Delaware 19803 ("Vesuvius") is desirous of acquiring the entire right, title and interest in and to the 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 Vesuvius, its legal representatives, successors, and assigns, the entire right, title and interest in and to the 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 the invention;

We hereby agree with Vesuvius 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 Vesuvius, execute such additional assignments and other writings and do such additional acts as Vesuvius may deem necessary or desirable to perfect Vesuvius' 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 the invention, and in enforcing any rights or choses 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;

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

June 1/2001
Date

[Signature]
Signature

JUNE 1/2001
Date

[Signature]
Signature

June 1/01
Date

[Signature]
Signature