FORM PTO-1619A Expires 06/30/99 OMB 0651-0027 06-23-1999

U.S. Department of Commerce Patent and Trademark Office PATENT

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Second Party	Execution Date  Month Day Year			
Name (line 1) Jose Simoes	6 8 99			
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Name (line 1) Vesuvius Crucible Company	If document to be recorded is an assignment and the receiving party is not			
Name (line 2) a Delaware Corporation	domiciled in the United States, an appointment			
Address (line 1) 103 Foulk Road, Suite 32	of a domestic representative is attached. (Designation must be a			
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U.S. Department of Commerce Patent and Trademark Office PATENT

Correspond	ent Name and Address	Area Code and Telephone Number	er 412-788-4441 x254		
Name	James R. Williams	OPR/FILATION			
Address (line 1)	Vesuvius Research				
Address (line 2)	4604 Campbells Run Road				
Address (line 3)	Pittsburgh, PA 15205				
Address (line 4)					
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attached copy is a true copy of the original document. Charges to deposit account are authorized, as					
indicated herein.  James R. Williams					
		Signature	<u>6 ((( ( 9 )</u>		
Name	e of Person Signing	Signature	Date		

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## PATENT APPLICATION ASSIGNMENT FROM INVENTORS TO VESUVIUS CRUCIBLE COMPANY

We, Francois-Noël Richard, a citizen of France, residing in France at Avenue Anatole France, 78, Nancy F-54000, FRANCE, and Jose Simoes residing in Belgium at Rue du Port 3/12, Saint-Ghislain B-7330, BELGIUM, have made a certain new and useful invention as set forth in an application for United States Letters Patent having serial number 09/284,166, based on International Application No. PCT/IB97/01281 entitled:

PLANT FOR TRANSFERRING LIQUID METAL, METHOD OF OPERATION, AND REFRACTORIES.

Vesuvius Crucible Company, a corporation of the State of Delaware and 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, 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

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.

26 /ay 1999 Date 08 JUNE 1999

**RECORDED: 06/16/1999** 

Signature

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