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

01-18-2001

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



101586558

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Submission Type	Conveyance Type				
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Conveying Party(ies)	Mark if additional names of conveying parties att				
Name (line 1) McGillivray, Shawn R.		Month Day Year			
Name (line 2) Second Party Name (line 1) Shand, Mark A. Name (line 2)		Execution Date Month Day Year 12 15 00 09446900			
Receiving Party	Mark if additional names of receiv				
Name (line 1) VESUVIUS CRUCIBLE COMPAN		If document to be recorded			
Name (line 2) a corporation of the State of Delaw	rare	 is an assignment and the receiving party is not domiciled in the United States, an appointment 			
Address (line 1) 103 Foulk Road		of a dorrestic representative is attached. (Designation must be a			
Address (line 2) Suite 202		separate document from Assignment.)			
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Mail documents to be recorded with required cover sheet(s) information to: Commissioner of Patents and Trademarks, Box Assignments , Washington A ...

REEL: 011429 FRAME: 0442

FORM PTO-1619B Expires 06/30/99 OMB 0651-0027	Page 2	U.S. Department of Commerce Patient and Trademark Office PATENT
Correspondent Name ar	nd Address Area Code and Telephone Numb	per (412) 276-1750
Name James R. Willi	ams, Reg. No. 43,268	
Address (line 1) Vesuvius		
Address (line 2) 27 Noblestown	ו Road	
Address (line 3) Carnegie, PA	15106-1632	
Address (line 4) USA		
_	al number of pages of the attached conveyance do y attachments.	ocument # 6
Patent Application	on Number or the Patent Number (DO NOT ENTER BOTH num Number(s) Pa	atent Number(s)
Patent Cooperation Trea Enter PCT applicat only if a U.S. Appli has not been assi	cation Number PCT PCT PCT	PCT PCT
Number of Properties	Enter the total number of properties involved.	# 1
Fee Amount	Fee Amount for Properties Listed (37 CFR 3.41)): \$ 40.00
Method of Payment: Deposit Account	Enclosed Deposit Account X	
(Enter for payment by depos	it account or if additional fees can be charged to the account.) Deposit Account Number:	# 220281
	Authorization to charge additional fees:	: Yes X 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.

ames 6lml Name of Person Signing JAMES R WILLIAMS Signature

29 Dec Zoos

Date

FORM PTO-1619C Expires 06/30/99 OMB 0651-0027

RECORDATION FORM COVER SHEET CONTINUATION PATENTS ONLY

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

Conveying Pa	rty(ios)	
Enter additional C	Thank it decides at Terries of conveying parties attached	Execution Date
		Month Day Year
Name (line 1) Mi	ller, Thomas M.	12 21 00
Name (line 2)		F K Duk
		Execution Date Month Day Year
Name (line 1)		
Name (line 2)		
		Execution Date Month Day Year
Name (line 1)		
Name (line 2)		
Receiving Par	rty(ies) Mark if additional names of receiving partie	es attached
Enter additional R	Receiving Party(ies)	_
Name (line 1)		If document to be recorded is an assignment and the
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	City State/Country Zip Coo	e
Name (line 1)		If document to be recorded is an assignment and the
Name (line 2)		receiving party is not domiciled in the United
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Address (line 1)		domestic representative is attached. (Designation must
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71001035 (iii £ 2)		
Address (line 3)	City State/Country Zip C	nde
Application N	umber(s) or Patent Number(s) Mark if additional numbers attached	
• •	Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the sa	me property).
Pa	tent Application Number(s) Patent Numb	er(s)

PATENT REEL: 011429 FRAME: 0444 Docket No.: 1341P-1 US

INVENTION/PATENT APPLICATION ASSIGNMENT FROM INVENTORS TO COMPANY

WHEREAS WE,

Shawn R. McGillivray a U.S. citizen residing at 2005 Carville Street, No.B, Reno, Nevada 89512;

Mark A. Shand of a U.K. citizen residing at 111 Fairmont Drive, Findlay, Ohio 45840; and

Thomas M. Miller a U.S. citizen residing at 19826 Hidden Trail Place, Walnut, California 91789, have made a certain new and useful invention as set forth in an application for United States Letters Patent, entitled:

AMPHOTERIC MAGNESIUM BUFFERS

executed by us on the date of execution of this document, as shown below, and was filed on September 20, 2000 as US Application Serial No. 09/666,900.

AND WHEREAS, Vesuvius Crucible Company, a corporation of the State of Delaware and having an address of 103 Foulk Road, Suite 202, Wilmington, DE 19803, 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

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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;

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.

12-04-00	Se-Bonikla Seponikle
Date 12-15-00	Signature
Date 12 - 21 - 00 Date	Signature William Signature
, ,	Signature
STATE OF NEVADA))
COUNTY OF WAShoe)
known to be the perso	edged to me that he/she executed the same
S EKRISTI KENNEY Notary Public - State of Nevada Appointment Recorded in Washoe County No: 00-82668-2 - Expires April 18, 2004	My commission expires fail 2000
STATE OF))
COUNTY OF)

Docket No.: 1341P-1 US

known to be the pers	
S E A L	Notary Public & Bagley
	My commission expires Notary Public, State of Ohio My Commission Expires February 22, 2004
On this $\frac{1}{2}$ personally appeared known to be the personstrument, and acknowledge for uses and purposes the second se	day of () 2000, before me THOMAS MILLER, to me son named in and who executed the above ledged to me that he/she executed the same herein set forth.
SEAL	Notary Public My commission expires Notary Public, State of Ohlo Notary Public, State of Ohlo Notary Public, State of Ohlo

Page 3 of 3

PATENT REEL: 011429 FRAME: 0447