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Execution Date(s) 7/29/2008, 7/29/2008, 7/29/2008	
Assignment Merger	
Security Agreement Change of Name	City: <u>MINATO-KU</u>
Joint Research Agreement	State: TOKYO
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4. Application or patent number(s):	document is being filed together with a new application.
A. Patent Application No.(s)	B. Patent No.(s)
12/188,446	
Additional numbers attached? Yes Vo	
5. Name and address to whom correspondence concerning document should be malled:	6. Total number of applications and patents involved:_ <u>1</u>
Name: HOWSON & HOWSON LLP	7. Total fee (37 CFR 1.21(h) & 3.41) \$_40
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## ASSIGNMENT

WHEREAS, Yuichiro Shindo, Masahiro Sakaguchi and Mitsuru Yamaguchi, hereinafter referred to as ASSIGNORS, have invented and are the owners of an invention entitled ZIRCONIUM CRUCIBLE, said invention being fully set forth and described in the application for Letters Patent of the United States which has been prepared in connection with said invention, and which has been signed by ASSIGNORS; and

WHEREAS, Nippon Mining & Metals Co., Ltd., a Japanese corporation engaged in business at 10-1, Toranomon 2-chome, Minato-ku, Tokyo, 105-0001 Japan, hereinafter referred to as ASSIGNEE, is desirous of acquiring the said invention and any and all applications for Letters Patent and any and all Letters Patent of the United States and foreign countries which may be issued therefor;

NOW THEREFORE, THIS IS TO WITNESS, that in consideration of the sum of One Dollar (\$1.00) paid to ASSIGNORS by ASSIGNEE, the receipt of which is hereby acknowledged, and for other good and valuable consideration, ASSIGNORS have sold, assigned and set over, and hereby do sell, assign and set over, unto ASSIGNEE, its successors and assigns, the entire right, title and interest for, to and within the United States and all foreign countries, in and to the aforesaid invention and in and to any and all application for Letters Patent and Letters Patent which may be issued therefor in the United States and in any and all foreign countries.

And ASSIGNORS hereby authorize and request the Commissioner of Patent and Trademarks to issue any and all Letters patent of the United States to ASSIGNEE, its successors and assigns, as the owner of all right, title and interest therein.

And for said consideration, it is hereby covenanted and agreed that at the request and expense of ASSIGNEE, its successors and assigns, ASSIGNORS will execute any further papers and do such other acts and things as may be necessary and proper to procure Letters Patent for said invention in the United States and in such foreign countries as ASSIGNEE, its successors and assigns may elect, and vest the full title thereto in ASSIGNEE, its successors and assigns.

And ASSIGNORS hereby authorize and direct its attorneys to insert, in the space provided below, the serial number and filing date of the aforesaid application for Letters Patent of the United States when the same shall have been made known to them by the United States Patent and Trademark Office.

> PATENT REEL: 021372 FRAME: 0602

1

IN WITNESS WHEREOF, this Assignment has been executed on the date accompanying my signature.

29th. July, 2008 (Date) yuchin Shindo Yuichiro Shindo hiro Sakaguchi (Date) masahiro\_ 29th July, 2005 (Date) Mitsuru Jamaguchi Mitsuru Yamaguchi

Application for United States Letters patent Serial Number 12/188,446 filed August 8, 2008

2

PATENT REEL: 021372 FRAME: 0603

**RECORDED: 08/11/2008**