PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3484986

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Takayuki NAKAI	07/25/2015
Satoshi MATSUBARA	04/28/2015
Osamu NAKAI	04/28/2015
Yoji KYODA	05/12/2015

RECEIVING PARTY DATA

Name:	SUMITOMO METAL MINING CO., LTD.
Street Address:	11-3, SHIMBASHI 5-CHOME
Internal Address:	MINATO-KU
City:	TOKYO
State/Country:	JAPAN
Postal Code:	105-8716

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14651396

CORRESPONDENCE DATA

Fax Number: (703)836-2787

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 703-836-6400
Email: email@oliff.com
Correspondent Name: JAMES A. OLIFF
Address Line 1: OLIFF PLC

Address Line 2: P.O. BOX 320850

Address Line 4: ALEXANDRIA, VIRGINIA 22320-4850

ATTORNEY DOCKET NUMBER:	166592	
NAME OF SUBMITTER:	ANNALYNN H. STEIN	
SIGNATURE:	/Annalynn H. Stein/ for Padowithz Alce	
DATE SIGNED:	08/14/2015	
	This document serves as an Oath/Declaration (37 CFR 1.63).	

PATENT REEL: 036335 FRAME: 0628

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Total Attachments: 6 source=166592_DecAssign_081715#page1.tif source=166592_DecAssign_081715#page2.tif source=166592_DecAssign_081715#page3.tif source=166592_DecAssign_081715#page4.tif source=166592_DecAssign_081715#page5.tif source=166592_DecAssign_081715#page6.tif

PATENT REEL: 036335 FRAME: 0629

ASSIGNMENT (BEING FILED FOR DUAL PURPOSE UNDER 37 CFR 1.63(e)) For Application with Filing Date on or after September 16, 2012

ASSIGNMENT

ad, the receipt and sufficier reby does assign, transfer a ITOMO METAL MINING Shimbashi 5-chome, Min esignated as the Assignee) at, title and interest for the U	ncy of which are land set over to GCO., LTD. nato-ku, Tokyo 10 and Assignee's he	eirs, successors, assigns and legal representatives
ad, the receipt and sufficier reby does assign, transfer a ITOMO METAL MINING Shimbashi 5-chome, Min esignated as the Assignee) at, title and interest for the U	(8) r (\$1.00) and other of which are land set over to G CO., LTD. nato-ku, Tokyo 10 and Assignee's he	hereby acknowledged, each undersigned agrees to 05-8716 Japan eirs, successors, assigns and legal representatives
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ntemational, substitute and tion certificates that may be CESSING DEVICE AND	ent including any direissue application on the granted on the Department of the Depa	America as defined in 35 U.S.C. §100, in the and all provisional, non-provisional, divisional, ion(s), and all Letters Patent, extensions, reissues invention known as
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ket No.), f	iled on even date herewith or as
oplication Number 1	4/651,396	

	CESSING DEVICE ANI TAINING BARREN SO ket No. pplication Number apers necessary in connect	tion certificates that may be granted on the CESSING DEVICE AND PROCESSING TAINING BARREN SOLUTION ket No

declared concerning any application or patent for the invention and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or post-grant proceeding.

3) Each undersigned agrees to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

4) Each undersigned agrees to perform all affirmative acts which may be necessary to obtain, maintain or confirm by reissue or

reexamination a grant of a valid United States patent to the Assignee.

5) Each undersigned authorizes and requests the Commissioner of the U.S. Patent and Trademark Office to issue any and all patents resulting from said application(s) to the said Assignee, as Assignee of the entire interest, and covenants that he or she has full right to convey the entire interest herein assigned, and that he or she has not executed, and will not execute, any agreement(s) in conflict herewith, and agrees that this assignment is binding on Assignor and Assignor's heirs, successors, assigns and legal representatives.

6) Each undersigned hereby grants the firm of OLIFF PLC the power to insert on this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

\cdot (13) Declaration

As an above named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of a claimed invention (or claimed design) in the above-identified application for which this declaration is being submitted.

The application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified application, including the claims, and am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

> **PATENT** REEL: 036335 FRAME: 0630

Date	Jul. 25, 2015	Inventor Signature	中井隆行	(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature '		(SEAL)
Date	No.	Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date -	-	Inventor Signature	. ,	(SEAL)
neither,	This assignment should preferably be sign then it should be signed before at least two	ned before: (a) a Notary Public o witnesses who also sign here:	if within the U.S.A. (b) a U.S. Consul if outsid	e the U.S.A. If
Date		Witness		
Date .	•	Witness		

ASSIGNMENT (BEING FILED FOR DUAL PURPOSE UNDER 37 CFR 1.63(e)) For Application with Filing Date on or after September 16, 2012

ASSIGNMENT

	Insert	(1)	Satoshi MATSUBARA	(2)	Osamu NAKAI		
(1-8)	Legal Name(s)	(3)	Yoji KYODA	(4)			
	of Inventor(s)	(5)		(6)			
		(7)		(8)			
		the un		cy of which are I	r good and valuable consideration paid to each of nereby acknowledged, each undersigned agrees to		
(9)	Insert Name of Assignee	(9)	SUMITOMO METAL MINING	CO., LTD.			
(10)	Insert Address of Assignee	(10)	10) 11-3, Shimbashi 5-chome, Minato-ku, Tokyo 105-8716 Japan				
(11)	Insert Identification such as Title, Case	the en invent contin	tire right, title and interest for the U ion, and in all applications for pater uation, international, substitute and examination certificates that may be	nited States of Ant including any reissue applicate granted on the PROCESSING	cirs, successors, assigns and legal representatives, america as defined in 35 U.S.C. §100, in the and all provisional, non-provisional, divisional, ion(s), and all Letters Patent, extensions, reissues invention known as		
	Number, or Foreign Application Number		1				
		(Attor	mey Docket No.), 1	filed on even date herewith or as		
(12)	Alternative	(12)	U.S. Application Number				
	Identification for			***************************************			
	filed applications	filed	•				
o execu	ite separate assignments in c	connection	with such applications and patent	s as the Assigne	plication and/or patent for the invention and also the may deem necessary. Therefore or post-grant proceeding which may be		

declared concerning any application or patent for the invention and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or post-grant proceeding.

3) Each undersigned agrees to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

4) Each undersigned agrees to perform all affirmative acts which may be necessary to obtain, maintain or confirm by reissue or reexamination a grant of a valid United States patent to the Assignee.

5) Each undersigned authorizes and requests the Commissioner of the U.S. Patent and Trademark Office to issue any and all patents from said on patients of the said Assignee.

resulting from said application(s) to the said Assignee, as Assignee of the entire interest, and covenants that he or she has full right to convey the entire interest herein assigned, and that he or she has not executed, and will not execute, any agreement(s) in conflict herewith, and agrees that this assignment is binding on Assignor and Assignor's heirs, successors, assigns and legal representatives.

6) Each undersigned hereby grants the firm of OLIFF PLC the power to insert on this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Declaration

As an above named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of a claimed invention (or claimed design) in the above-identified application for which this declaration is being submitted.

The application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified application, including the claims, and am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

> PATENT **REEL: 036335 FRAME: 0632**

Date	4/28/2015	Inventor Signature	松原、输	(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		. (SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
neither,	This assignment should preferably be sign then it should be signed before at least two	ed before: (a) a Notary Public witnesses who also sign here;	if within the U.S.A. (b) a U.S. Consul if outs	ide the U.S.A. It
Date		Witness		
Date		Witness		

Date	Inv	entor Signature		-	(SEAL)
Date	04/28/2015 Inv	entor Signature	中井	113	(SEAL)
Date	Inv	entor Signature			(SEAL)
Date	Inv	entor Signature			(SEAL)
Date _	Iny	entor Signature			(SEAL)
Date .	Inv	entor Signature	· · · · · · · · · · · · · · · · · · ·		(SEAL)
Date .	Inve	entor Signature			(SEAL)
Date _.	Inve	entor Signature			(SEAL)
neither, t	This assignment should preferably be signed before hen it should be signed before at least two witnesses	: (a) a Notary Publ s who also sign her	ic if within the U.S.A. (b) are:	a U.S. Consul if outside the	U.S.A. If
Date _	Wi	tness			
Date	Wi	tness			

Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date	5月12日 2015年	Inventor Signature	京田 洋治	(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature	· · · · · · · · · · · · · · · · · · ·	(SEAL)
Date		Inventor Signature	Mark	(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
neither,	This assignment should preferably be sig then it should be signed before at least two	ned before: (a) a Notary Public i o witnesses who also sign here:	f within the U.S.A. (b) a U.S. Consul if (outside the U.S.A. If
Date		Witness	**************************************	
Date		Witness		