505692738 09/26/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
NOBUAKI MIYAMOTO	09/03/2019
ATSUSHI MIKI	09/03/2019

RECEIVING PARTY DATA

Name:	JX NIPPON MINING & METALS CORPORATION	
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State/Country:	JAPAN	
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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16498003

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	763P068
NAME OF SUBMITTER:	KEVIN S. LEMACK
SIGNATURE:	/Kevin S. Lemack/
DATE SIGNED:	09/26/2019

Total Attachments: 2

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PATENT 505692738 REEL: 050502 FRAME: 0383

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ASSIGNMENT

International Application No: PCT/JP2019/017092

Filed: April 22, 2019

Title: SURFACE TREATED COPPER FOIL, COPPER CLAD LAMINATE, AND

PRINTED CIRCUIT BOARD

For good and valuable consideration, the receipt and sufficiency of which are hereby agreed, each of the undersigned hereby assigns to JX Nippon Mining & Metals Corporation ("Assignee") and its successors and assigns the entire right, title, and interest in and to the inventions of the undersigned disclosed in the application listed above, and in any and all other applications anywhere in the world which the undersigned may file and/or be named as an inventor of, solely or jointly, on said inventions, in any and all patents which may be obtained on any of said applications and in any and all reissues, reexaminations, supplemental examinations, inter partes reviews, oppositions, post-grant reviews, supplementary protection certificates and/or extensions thereof, including, without limitation, the right to bring suit and to claim and retain all damages and/or seek other remedies for the past, present, and future infringement of any of the foregoing, the right of priority, including without limitation to claim priority benefit of or to said patent applications, and requests the Commissioner for Patents in the United States and similar authorities outside the United States to issue said patents to and in the name of the Assignee.

Each of the undersigned authorizes the attorneys of record in the application listed above to insert in this assignment the title, filing date, and application number of the application listed above when officially known.

Each of the undersigned states that the application listed above is or was made or authorized to be made by him or her. Each of the undersigned believes himself or herself to be the original sole inventor or an original joint inventor with another undersigned of a claimed invention in the application listed above. Each of the undersigned acknowledges that any willful false statement made by him or her

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in this paragraph is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than five years, or both.

Except in favor of Assignee, each of the undersigned warrants that: (i) he or she is the owner of all his or her right, title, and interest herein assigned and has the right to make this unconditional and irrevocable assignment to Assignee without obtaining any approval or permission of a third party; and (ii) there are no outstanding encumbrances, liens, prior assignments, licenses, or other obligations or restrictions on the right, title, and interest herein assigned.

Upon the request of Assignee and at no expense to the undersigned, each of the undersigned hereby agrees to execute any and all applications on said inventions, including without limitation for the reissue, reexamination, supplementary protection certificate or extension thereof and any oath, declaration, or affidavit relating thereto that said Assignee may deem necessary or expedient, and to cooperate to the best of the ability of the undersigned with and perform any and all affirmative acts requested by Assignee to prepare, file, prosecute, maintain, defend, enforce and vest in Assignee the right, title, and interest assigned herein, including without limitation, preparing and executing statements and giving and producing evidence in support thereof, whereby said right, title, and interest will be held and enjoyed by said Assignee to the full end of the term for which said patents may be granted as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

Date: <u>Suptember 3, 2019</u>

Nobacki Miyamoto

Date: September 3 2019

RECORDED: 09/26/2019

Atsushi Miki