PATENT ASSIGNMENT COVER SHEET

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------|----------------|
| YASUYOSHI KATO | 05/28/2015 |
| KEIICHIRO KAI | 05/28/2015 |
| KENICHI ARAKAWA | 05/28/2015 |
| NAOMI IMADA | 05/28/2015 |

RECEIVING PARTY DATA

| Name: | BABCOCK-HITACHI KABUSHIKI KAISHA | |
|-----------------|------------------------------------|--|
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| City: | TOKYO | |
| State/Country: | JAPAN | |
| Postal Code: | 101-0021 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14414900 |

CORRESPONDENCE DATA

Fax Number: (518)452-5579

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.

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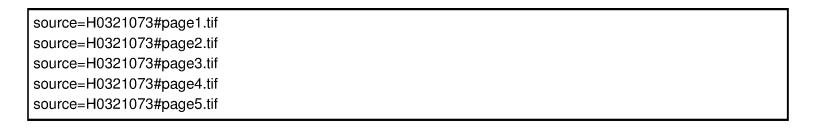
Address Line 4: ALBANY, NEW YORK 12203

| ATTORNEY DOCKET NUMBER: | 0887.044 | |
|--------------------------------|--|--|
| NAME OF SUBMITTER: | JEFF ROTHENBERG | |
| SIGNATURE: | /Jeff Rothenberg/ | |
| DATE SIGNED: 06/26/2015 | | |
| | This document serves as an Oath/Declaration (37 CFR 1.63). | |
| | | |

Total Attachments: 5

PATENT REEL: 035986 FRAME: 0024

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PATENT REEL: 035986 FRAME: 0025

ASSIGNMENT AND DECLARATION

WHEREAS, WE,

Yasuyoshi KATO, a citizen of Japan, with a mailing address of c/o Kure Research Laboratory, Babcock-Hitachi Kabushiki Kaisha, 6-9, Takara-machi, Kure-shi, Hiroshima 737-8508:

Keiichiro KAI, a citizen of Japan, with a mailing address of c/o Kure Research Laboratory, Babcock-Hitachi Kabushiki Kaisha, 6-9, Takara-machi, Kure-shi, Hiroshima 737-8508:

Kenichi ARAKAWA, a citizen of Japan, with a mailing address of c/o Kure Research Laboratory, Babcock-Hitachi Kabushiki Kaisha, 6-9, Takara-machi, Kure-shi, Hiroshima 737-8508; and

Naomi IMADA, a citizen of Japan, with a mailing address of c/o Kure Research Laboratory, Babcock-Hitachi Kabushiki Kaisha, 6-9, Takara-machi, Kure-shi, Hiroshima 737-8508

(INVENTORS) have invented certain new and useful improvements in

CATALYST STRUCTURE

which is the subject of United States Application Serial Number 14/414,900 filed January 15, 2015, and

WHEREAS, BABCOCK-HITACHI KABUSHIKI KAISHA, having offices at 14-1, Sotokanda 4-chome, Chiyoda-ku, Tokyo 101-0021, Japan, is desirous of obtaining the entire right, title and interest in, to and under said improvements and said application; and

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of which I hereby acknowledge, WE, the above identified INVENTORS, hereby assign, transfer and set over to BABCOCK-HITACHI KABUSHIKI KAISHA, its successors, legal representatives and assigns, the entire right title and interest in, to and under said improvements, the above-identified application - including the right to claim priority to said application - all divisions, renewals and continuations thereof, and all Letters Patent which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, and all Letters Patent which may be granted for said improvements in any country or countries foreign to the

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United States and all extensions, renewals and reissues thereof; and We hereby authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to BABCOCK-HITACHI KABUSHIKI KAISHA, its successors, legal representatives and assigns, in accordance with the terms of this instrument;

AND WE HEREBY covenant that We have full right to convey the entire interest herein assigned, and that We have not executed, and will not execute, any agreement in conflict herewith;

AND WE HEREBY further covenant and agree that We will communicate to BABCOCK-HITACHI KABUSHIKI KAISHA, its successors, legal representatives and assigns, any facts known to us respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid BABCOCK-HITACHI KABUSHIKI KAISHA, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said improvements in all countries;

AND WE HEREBY grant Heslin Rothenberg Farley & Mesiti, P.C. the power to insert on this assignment any further identification which 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;

AND WE HEREBY, as the above named inventors, declare that the above-identified application was made or authorized to be made by us;

AND WE HEREBY, as the above named inventors, declare that We believe that We are the original inventors of a claimed invention in the above-identified application;

AND WE HEREBY state that We have reviewed and understand the contents of the above-identified specification, including the claims;

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AND WE HEREBY acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

AND WE HEREBY declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that any willful false statements and the like so made in this declaration are punishable by fine or imprisonment of not more than five (5) years, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 28 day of

yasuyvshi Kato Yasuyoshi KATO

Masaahi Usedo Witness

Chira Hirai
Witness

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this adaption of the season of t

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 👱 day of

Naomi Imada
Naomi IMADA

Masaelsi Usedo
Witness

Akira Shirai
Witness

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RECORDED: 06/26/2015

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PATENT REEL: 035986 FRAME: 0030