502916702 07/31/2014

PATENT ASSIGNMENT COVER SHEET

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

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| YASUHIKO HOSOKAWA | 06/10/2014 |
| TOSHIFUMI ISE | 06/11/2014 |
| SHINSUKE KADOI | 06/15/2014 |

RECEIVING PARTY DATA

| Name: | TOSHIBA MITSUBISHI-ELECTRIC INDUSTRIAL SYSTEMS CORPORATION | |
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| City: | CHUO-KU, TOKYO | |
| State/Country: | JAPAN | |
| Postal Code: | 104-0031 | |
| Name: | OSAKA UNIVERSITY | |
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| City: | SUITA-SHI, OSAKA | |
| State/Country: | JAPAN | |
| Postal Code: | 565-0871 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14376057 |

CORRESPONDENCE DATA

Fax Number: (703)413-2220

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Address Line 4: ALEXANDRIA, VIRGINIA 22314

| ATTORNEY DOCKET NUMBER: | 438272US8X PCT |
|-------------------------|------------------|
| NAME OF SUBMITTER: | SARFARAZ AHMED |
| SIGNATURE: | /Sarfaraz Ahmed/ |

PATENT 502916702 REEL: 033437 FRAME: 0939

| DATE SIGNED: | 07/31/2014 | |
|--------------------------------------|------------|--|
| Total Attachments: 4 | | |
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| source=438272US-Assignment#page2.tif | | |
| source=438272US-Assignment#page3.tif | | |
| ource=438272US-Assignment#page4.tif | | |
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PATENT REEL: 033437 FRAME: 0940

Assignment of Application

| SERT NAMES | WHEREAS, I (WE | Yasuhiko HOSOKAWA, Chuo-ku, Tokyo, Japan | |
|--|---------------------|---|--------------|
| ND RESIDENCE DDRESS OF HE INVENTORS: | · | Toshifumi ISE, Suita-shi, Osaka, Japan | |
| E INVENTORS. | | Shinsuke KADOI, Suita-shi, Osaka, Japan | |
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| | | | respectively |
| RT TITLE OF ENTION: | have invented certa | in new and useful improvements in: Power Conversion Apparatus | |
| | (Application No. | , filed |), and |
| | | 1)TOSHIBA MITSUBISHI-ELECTRIC INDUSTRIAL SYSTEMS CORPORATION | |
| RT NAME ADDRESS OF IPANY OR | | 2)OSAKA UNIVERSITY | |
| ER ASSIGNEE | <i>a</i> : 0 | | |

(hereinafter referred to as "ASSIGNEE") having a place of business at:

(1)3-1-1 Kyobashi, Chuo-ku, Tokyo 104-0031, Japan

(2)1-1, Yamadaoka, Suita-shi, Osaka 565-0871 Japan is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries;

NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby acknowledged, and for other good and valuable consideration, I (WE), by these presents do sell, assign and transfer unto said ASSIGNEE, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations, substitutions and renewals thereof.

I (WE) hereby authorize and request the Patent Office Officials in the United States and its territorial possessions and any and all foreign countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my (our) entire right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its (his) successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me (us) had this Assignment and sale not been made.

Further, I (WE) agree that I (WE) will communicate to said ASSIGNEE or its (his) representatives any facts known to me (us) respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letter Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.

The undersigned hereby grant(s) the firm of Oblon, Spivak, McClelland, Maier & Neustadt, P.C. of 1940 Duke Street, Alexandria, Virginia 22314 the power to insert on this assignment any further identification, including the application number and filing date, 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.

| Date: | June 10, 2014 | <u></u> | Jasulto Hostawa |
|---------|---------------------------------------|-------------------------|-------------------|
| | | (Signature of Inventor) | Yasuhiko HOSOKAWA |
| | | • | |
| Date: _ | · · · · · · · · · · · · · · · · · · · | | |
| | | (Signature of Inventor) | |
| | | | |
| Date: _ | | | |
| | | (Signature of Inventor) | Toshifumi ISE |
| Date: | | | |
| Jaie | · · · · · · · · · · · · · · · · · · · | | |
| | • | (Signature of Inventor) | Shinsuke KADOI |
| | | | |
| Date: _ | | v. | |
| | | (Signature of Inventor) | |
| | | | |
| Date: _ | · · · · · · · · · · · · · · · · · · · | | |
| | | (Signature of Inventor) | |

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.

ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

Assignment of Application

| WHEREAS, I (WE) | Yasuhiko HOSOKAWA, Chuo-ku, Tokyo, Japan | |
|---------------------------------------|---|--------------|
| | Toshifumi ISE, Suita-shi, Osaka, Japan | |
| | Shinsuke KADOI, Suita-shi, Osaka, Japan | |
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| | | respectively |
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| have invented certai | in new and useful improvements in: Power Conversion Apparatus | |
| (Application No. | _, filed |), and |
| | 1)TOSHIBA MITSUBISHI-ELECTRIC INDUSTRIAL SYSTEMS CORPORATION | |
| | 2)OSAKA UNIVERSITY | |
| (hereinafter referred | to as "ASSIGNEE") having a place of business at: | |
| | Chuo-ku, Tokyo 104-0031, Japan | |
| | Suita-shi, Osaka 565-0871 Japan is desirous of acquiring the entire right, title and intered in and to any Letters Patent that may be granted therefore in the United States and it | |

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and to any and all divisions, reissues, continuations, substitutions and renewals thereof.

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I (WE) hereby authorize and request the Patent Office Officials in the United States and its territorial possessions and any and all foreign countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my (our) entire right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its (his) successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me (us) had this Assignment and sale not been made.

Further, I (WE) agree that I (WE) will communicate to said ASSIGNEE or its (his) representatives any facts known to me (us) respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letter Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.

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| Date: | |
|---------------------|---|
| | (Signature of Inventor) Yasuhiko HOSOKAWA |
| Date: | |
| | (Signature of Inventor) |
| Date: June 11, 2014 | Toshifumi Use |
| | (Signature of Inventor) Toshifumi ISE |
| Date: June 15, 2014 | S Winsuke Kadoc |
| | (Signature of Inventor) Shinsuke KADOI |
| Date: | |
| | (Signature of Inventor) |
| Date: | |
| • | (Signature of Inventor) |

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.
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12/04

PATENT REEL: 033437 FRAME: 0944

RECORDED: 07/31/2014