

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>Hideaki SAKAGUCHI</td><td>10/29/2009</td></tr><tr><td>Akinori SHIRAISHI</td><td>10/29/2009</td></tr></tbody></table>		Name	Execution Date	Hideaki SAKAGUCHI	10/29/2009	Akinori SHIRAISHI	10/29/2009				
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Hideaki SAKAGUCHI	10/29/2009										
Akinori SHIRAISHI	10/29/2009										
RECEIVING PARTY DATA											
<table border="1"><tr><td>Name:</td><td>SHINKO ELECTRIC INDUSTRIES CO., LTD.</td></tr><tr><td>Street Address:</td><td>80, Oshimada-machi, Nagano-shi,</td></tr><tr><td>City:</td><td>Nagano</td></tr><tr><td>State/Country:</td><td>JAPAN</td></tr><tr><td>Postal Code:</td><td>381-2287</td></tr></table>		Name:	SHINKO ELECTRIC INDUSTRIES CO., LTD.	Street Address:	80, Oshimada-machi, Nagano-shi,	City:	Nagano	State/Country:	JAPAN	Postal Code:	381-2287
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PROPERTY NUMBERS Total: 1											
<table border="1"><thead><tr><th>Property Type</th><th>Number</th></tr></thead><tbody><tr><td>Application Number:</td><td>12609054</td></tr></tbody></table>		Property Type	Number	Application Number:	12609054						
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Application Number:	12609054										
CORRESPONDENCE DATA											
Fax Number: (202)797-8188 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>											
Phone: 202 797 4181											
Email: IPUSA@IPUSAPAT.COM											
Correspondent Name: IPUSA, P.L.L.C											
Address Line 1: 1054 31ST STREET, N.W.											
Address Line 2: Suite 400											
Address Line 4: Washington, DISTRICT OF COLUMBIA 20007											
ATTORNEY DOCKET NUMBER:	09SD-009										
NAME OF SUBMITTER:	Martin A. Weeks										
Total Attachments: 3 source=AssignmentRecordation#page1.tif source=AssignmentRecordation#page2.tif											

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PATENT
REEL: 023446 FRAME: 0404

RECORDATION FORM COVER SHEET
PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

Hideaki SAKAGUCHI, Akinori SHIRAISHI

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance/Execution Date(s):

Execution Date(s) October 29, 2009

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Joint Research Agreement
☐ Government Interest Assignment
☐ Executive Order 9424, Confirmatory License
☐ Other _____

2. Name and address of receiving party(ies)

Name: SHINKO ELECTRIC INDUSTRIES CO., LTD.

Internal Address: _____

Street Address: 80, Oshimada-machi, Nagano-shi,

City: Nagano

State: _____

Country: Japan Zip: 381-2287

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application or patent number(s):

☒ This document is being filed together with a new application.

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address to whom correspondence concerning document should be mailed:

Name: IPUSA, PLLC

Internal Address: _____

Street Address: 1054 31st Street, N.W., Suite 400

City: Washington

State: DC Zip: 20007

Phone Number: 202-797-4181

Fax Number: 202-797-8188

Email Address: ipusa@ipusapat.com

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00

- ☐ Authorized to be charged by credit card
☒ Authorized to be charged to deposit account
☐ Enclosed
☐ None required (government interest not affecting title)

8. Payment Information

a. Credit Card Last 4 Numbers _____
Expiration Date _____

b. Deposit Account Number 50-4424

Authorized User Name Martin A. Weeks

9. Signature: Martin A. Weeks

Signature

10/30/2009

Date

Martin A. Weeks

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

3

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0148, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

ASSIGNMENT

THIS ASSIGNMENT, by (1) Hideaki SAKAGUCHI, and (2) Akinori SHIRAISHI, (hereinafter referred to as "Assignors"), residing at (1) Nagano-shi, Nagano, Japan, and (2) Nagano-shi, Nagano, Japan, respectively;

WHEREAS, Assignors have invented certain new and useful improvements in
WIRING SUBSTRATE AND METHOD OF MANUFACTURING
THE WIRING SUBSTRATE _____, set forth in a
patent application for Letters Patent of the United States, executed concurrently herewith;
and

WHEREAS, SHINKO ELECTRIC INDUSTRIES CO., LTD. (hereinafter referred to as "Assignee"), having offices at 80, Oshimada-machi, Nagano-shi, Nagano 381-2287 Japan, is desirous of acquiring the entire right, title and interest in and to said inventions and said application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefor and thereon;

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuation-in-part of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefor and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and Assignment not been made;

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles, and or interests that have arisen to Assignee under the law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign

all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives, and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns shall advise; that any proceeding in connection with said inventions, or said patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable;

AND Assignors hereby request that the Director of the United States Patent and Trademark Office issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the said Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns;

AND Assignors hereby grant the following individuals 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: All practitioners associated with the Customer Number 77464.

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

October 29, 2009
Date

Hideaki Sakaguchi
Hideaki SAKAGUCHI

October 29, 2009
Date

Akinori Shiraishi
Akinori SHIRAISHI