PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
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EPAS ID: PAT5693174

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ABL PATENT SECURITY AGREEMENT
SEQUENCE:	2

CONVEYING PARTY DATA

Name	Execution Date
JOHNSON CONTROLS ADVANCED POWER SOLUTIONS, LLC	08/27/2019

RECEIVING PARTY DATA

Name:	CITIBANK N.A., AS COLLATERAL AGENT
Street Address:	388 GREENWICH STREET
Internal Address:	7TH FLOOR
City:	NEW YORK
State/Country:	NEW YORK
Postal Code:	10013

PROPERTY NUMBERS Total: 36

Property Type	Number
Patent Number:	9331318
Patent Number:	8263246
Patent Number:	8679678
Patent Number:	9496557
Patent Number:	8535825
Patent Number:	8568915
Patent Number:	8999538
Patent Number:	9172067
Patent Number:	8114540
Patent Number:	8969756
Patent Number:	8354186
Patent Number:	9620827
Patent Number:	8609278
Patent Number:	8426059
Patent Number:	8603660
Patent Number:	9225045
Patent Number:	9209483
Patent Number:	9577231

Property Type	Number
Patent Number:	9774020
Patent Number:	8945740
Patent Number:	8874298
Patent Number:	9331314
Patent Number:	9350002
Patent Number:	7951477
Patent Number:	8530069
Patent Number:	8609268
Patent Number:	9941554
Patent Number:	8788225
Patent Number:	9105902
Patent Number:	9911953
Patent Number:	9276295
Patent Number:	8313855
Patent Number:	8541130
Patent Number:	8466691
Application Number:	14065172
Application Number:	15714930

CORRESPONDENCE DATA

Fax Number: (212)751-4864

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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ATTORNEY DOCKET NUMBER:	049133-0321
NAME OF SUBMITTER:	ANGELA M. AMARU
SIGNATURE:	/s/ Angela M. Amaru
DATE SIGNED:	08/29/2019

Total Attachments: 7
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ABL PATENT SECURITY AGREEMENT dated as of August 27, 2019 (this "Agreement"), among JOHNSON CONTROLS ADVANCED POWER SOLUTIONS, LLC (the "Grantor") and CITIBANK, N.A., as Collateral Agent (in such capacity, the "Collateral Agent").

Reference is made to the ABL Collateral Agreement dated as of April 30, 2019 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the "Collateral Agreement"), among the Grantor, the other grantors from time to time party thereto and the Collateral Agent, pursuant to which the Grantor granted to the Collateral Agent, for the benefit of the Secured Parties, a security interest in the Patent Collateral (as defined herein). Pursuant to the Collateral Agreement, the Grantor agreed to execute and deliver this Agreement in order to record the security interest granted to the Collateral Agent with the USPTO. Accordingly, the parties hereto agree as follows:

SECTION 1. Terms. Capitalized terms used in this Agreement and not otherwise defined herein have the meanings specified (including specified by referenced) in the Collateral Agreement. The rules of construction specified in Section 1.01(b) of the Collateral Agreement also apply to this Agreement.

SECTION 2. Grant of Security Interest. As security for the payment or performance, as the case may be, in full of the Secured Obligations, the Grantor hereby grants to the Collateral Agent, its successors and assigns, for the benefit of the Secured Parties, a security interest (the "Security Interest") in all of such Grantor's right, title and interest in, to and under the United States issued Patents and Patent applications listed on Schedule I attached hereto, together with (a) all reissues, reexaminations, continuations, divisionals, continuations-in-part, renewals or extensions thereof, (b) the right to sue or otherwise recover for any past, present and future infringement, or other violation or impairment thereof, and (c) all Proceeds of the foregoing, including without limitation license fees, royalties, income, payments, claims, damages and proceeds of suit, now or hereafter due and/or payable with respect thereto (the "Patent Collateral"). This Agreement is not to be construed as an assignment of any Patent Collateral.

SECTION 3. Collateral Agreement. The Security Interest granted to the Collateral Agent herein is granted in furtherance, and not in limitation, of the security interest granted to the Collateral Agent pursuant to the Collateral Agreement. The Grantor hereby acknowledges and affirms that the rights and remedies of the Collateral Agent with respect to the Patent Collateral are more fully set forth in the Collateral Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the Collateral Agreement, the terms of the Collateral Agreement shall govern.

SECTION 4. Termination. Upon the occurrence of the Termination Date or the release of the Grantor from its obligations under the Collateral Agreement pursuant to Section 5.13 of the Collateral Agreement, the security interest granted herein shall automatically terminate and the Collateral Agent shall execute, acknowledge, and deliver to the Grantor an instrument in writing in recordable form releasing the collateral pledge, grant, assignment, lien, and security interest in the Patent Collateral under this Agreement.

SECTION 5. Counterparts. This Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original but all of which when taken together shall constitute a single contract. Delivery of an executed signature page to this Agreement by facsimile or other electronic transmission shall be effective as delivery of a manually signed counterpart of this Agreement.

SECTION 6. Governing Law. This Agreement shall be construed in accordance with and governed by the law of the State of New York.

SECTION 7. Recordation. The Grantor authorizes and requests that the Commissioner for Patents record this ABL Patent Security Agreement with the U.S. Patent and Trademark Office.

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IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the date first above written.

JOHNSON CONTROLS ADVANCED POWER SOLUTIONS, LLC, as Grantor

By: _____

Name: Joseph A. Walicki
Title: Manager

CITIBANK, N.A., as Collateral Agent

By: _____

Name: Christopher Navaro

Title: Director & Vice President

Schedule I to the
ABL Patent Security Agreement

PATENT COLLATERAL

1. U.S. PATENT REGISTRATIONS

Company / Owner	Registered Patent	Serial/Registration Number	Filing Date	Registration Date
Johnson Controls Advanced Power Solutions, LLC	Battery Module	9331318	07/01/2009	05/03/2016
Johnson Controls Advanced Power Solutions, LLC	Current Collector for an Electrochemical Cell	8263246	11/20/2009	09/11/2012
Johnson Controls Advanced Power Solutions, LLC	Current Collector for an Electrochemical Cell	8679678	08/09/2012	03/25/2014
Johnson Controls Advanced Power Solutions, LLC	Current Collector for an Electrochemical Cell	9496557	02/17/2014	10/26/2016
Johnson Controls Advanced Power Solutions, LLC	Mandrel with Drive Member for Electrochemical Cells	8535825	11/30/2010	09/17/2013
Johnson Controls Advanced Power Solutions, LLC	Battery with Integrally Formed Terminal	8568915	02/10/2009	10/29/2013
Johnson Controls Advanced Power Solutions, LLC	Battery Module with Sealed Vent Chamber	8999538	02/09/2011	04/07/2015
Johnson Controls Advanced Power Solutions, LLC	Battery Cell and Terminal Configuration	9172067	07/02/2009	10/27/2015
Johnson Controls Advanced Power Solutions, LLC	Buss Bar for Batteries	8114540	08/07/2009	02/14/2012
Johnson Controls Advanced Power Solutions, LLC	Laser Cutting System	8969756	12/14/2009	03/03/2015
Johnson Controls Advanced Power Solutions, LLC	Interconnection Washer Assembly for a Battery Assembly	8354186	03/07/2011	01/15/2013
Johnson Controls Advanced Power Solutions, LLC	Thermal Management System for a Battery System	9620827	06/13/2011	04/11/2017
Johnson Controls Advanced Power Solutions, LLC	Battery Cell	8609278	03/07/2011	12/17/2013
Johnson Controls Advanced Power Solutions, LLC	Electrochemical Cell Having an Electrically-Insulated Housing	8426059	04/05/2011	04/23/2013
Johnson Controls Advanced Power Solutions, LLC	Battery System with Heat Exchanger	8603660	04/14/2011	12/10/2013

Company / Owner	Registered Patent	Serial/Registration Number	Filing Date	Registration Date
Johnson Controls Advanced Power Solutions, LLC	Battery System with Heat Exchanger	9225045	12/09/2013	12/29/2015
Johnson Controls Advanced Power Solutions, LLC	Lithium Ion Battery Module	9209483	11/18/2011	12/08/2015
Johnson Controls Advanced Power Solutions, LLC	Lithium Ion Battery Module	9577231	11/02/2015	02/21/2017
Johnson Controls Advanced Power Solutions, LLC	Lithium Ion Battery Module	9774020	02/19/2016	09/26/2017
Johnson Controls Advanced Power Solutions, LLC	Vent for Electrochemical Cell	8945740	10/10/2011	02/03/2015
Johnson Controls Advanced Power Solutions, LLC	Battery Power Source Device	8874298	06/21/2011	10/28/2014
Johnson Controls Advanced Power Solutions, LLC	Battery Module Having Electrochemical Cells with Integrally Formed Terminals	9331314	01/22/2010	05/03/2016
Johnson Controls Advanced Power Solutions, LLC	Thermal Management of a Battery System	9350002	06/30/2011	05/24/2016
Johnson Controls Advanced Power Solutions, LLC	Battery Module	7951477	06/09/2009	05/31/2011
Johnson Controls Advanced Power Solutions, LLC	Battery Module	8530069	05/12/2011	09/10/2013
Johnson Controls Advanced Power Solutions, LLC	Battery Module Having a Cell Tray with Thermal Management Features	8609268	12/16/2011	12/17/2013
Johnson Controls Advanced Power Solutions, LLC	Battery Module Having a Cell Tray with Thermal Management Features	9941554	12/16/2013	04/10/2018
Johnson Controls Advanced Power Solutions, LLC	Cell Diagnostic System and Method	8788225	12/16/2010	07/22/2014
Johnson Controls Advanced Power Solutions, LLC	Device for Aiding in the Fracture of a Vent of an Electrochemical Cell	9105902	06/13/2011	08/11/2015
Johnson Controls Advanced Power Solutions, LLC	Device for Aiding in the Fracture of a Vent of an Electrochemical Cell	9911953	07/31/2015	03/06/2018
Johnson Controls Advanced Power Solutions, LLC	Storage Battery Arrangement	9276295	01/29/2010	03/01/2016
Johnson Controls Advanced Power Solutions, LLC	Interconnection Washer Assembly for a Battery Assembly	8313855	09/08/2009	11/20/2012

Company / Owner	Registered Patent	Serial/Registration Number	Filing Date	Registration Date
Johnson Controls Advanced Power Solutions, LLC	Interconnectors for a Battery Assembly	8541130	11/16/2012	09/24/2013
Johnson Controls Advanced Power Solutions, LLC	Determination of Insulation Resistance of an Electric DC Circuit	8466691	12/08/2010	06/18/2013

2. U.S. PATENT APPLICATIONS

Company / Owner	Patent Application	Application Number	Application Date
Johnson Controls Advanced Power Solutions, LLC	System For Arranging And Coupling Battery Cells In A Battery Module	14/065,172	10/28/2013
Johnson Controls Advanced Power Solutions, LLC	Lithium Ion Battery Module	15/714,930	09/25/2017