506831325 08/23/2021

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SUBBARAO VARIGONDA	04/08/2019
JAROSLAW LEONARSKI	03/29/2019
HARSHA R. ADEMANE	04/02/2019

RECEIVING PARTY DATA

Name:	CUMMINS INC.
Street Address:	500 JACKSON STREET
City:	COLUMBUS
State/Country:	INDIANA
Postal Code:	47201

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17433116

CORRESPONDENCE DATA

Fax Number: (317)237-1000

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.

Phone: 3172370300

Email: cummins.ip@faegredrinker.com

Correspondent Name: ROBERT D. NULL

Address Line 1: 300 NORTH MERIDIAN STREET, SUITE 2500

Address Line 4: INDIANAPOLIS, INDIANA 46204

ATTORNEY DOCKET NUMBER: CI-18-0465-02-US

NAME OF SUBMITTER: ROBERT D. NULL

SIGNATURE: /robert d. null/

DATE SIGNED: 08/23/2021

Total Attachments: 12

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First Named Inventor: Subbarao Varigonda

Title: A BATTERY-ULTRACAPACITOR HYBRID ENERGY STORAGE SYSTEM ARCHITECTURE FOR MILD-

HYBRID POWER SYSTEMS

WHEREAS, we, **Subbarao Varigonda**, residing at 2886 Macintosh, Columbus, Indiana 47201; **Jaroslaw Leonarski**, residing at 4013 W North Wood Lake Drive, Columbus, Indiana 47201; and **Harsha R. Ademane**, residing at 7309 Windsor Lakes Place, Indianapolis, Indiana 46237, have invented certain new and useful improvements in an invention titled **A BATTERY-ULTRACAPACITOR HYBRID ENERGY STORAGE SYSTEM ARCHITECTURE FOR MILD-HYBRID POWER SYSTEMS** as described in United States Patent Application No. 62/833,823 , filed on April 15, 2019 (the "Application"), and

WHEREAS, Cummins Inc., a corporation of the State of Indiana, and having an address of 500 Jackson Street, Columbus, Indiana 47201, United States of America ("Assignee"), is desirous of acquiring the entire right, title and interest in and to the invention, the Application, and any and all Letters Patent or similar legal protection, foreign or domestic, to be obtained therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, we hereby assign, convey, and transfer to Assignee our entire worldwide rig ht, title, and interest in and to the invention, the Application, domestic and foreign patent applications claiming priority to the Application (including non-provisionals, provisionals, divisionals, continuations, and continuations-in-part), all Letters Patent and registrations issuing thereon, and all rights and benefits under any applicable treaty or convention; and we authorize the Commissioner of Patents and Trademarks of the United States or foreign equivalent thereof to issue the aforementioned the Letters Patent, registrations, and/or rights and benefits in any form, to Assignee.

We authorize Assignee, its successors and assigns, or anyone Assignee may properly designate, to (1) insert in this instrument the filing date and application number of the Application when ascertained, if applicable, (2) apply for Letters Patent, registrations, and all rights and benefits in any form in its own name in any and all countries, and (3) record this assignment agreement in any governmental office of any country having granted said Letters Patents, registrations, and/or rights and benefits, and (4) assign this agreement without further consideration.

We represent to Assignee that we have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. We agree that we, or our executors or administrators, will at any time upon request, without additional consideration but at the expense of Assignee, execute such additional writings and do such additional acts as Assignee may deem desirable to perfect its enjoyment of this grant, and render all assistance in making application for and obtaining, maintaining, and enforcing the Letters Patent or similar legal protection on the invention in any and all countries.

Attorney Docket No.: CI-18-0465-01-US

Page 2 of 4

First Named Inventor: Subbarao Varigonda

File: A BATTERY-ULTRACAPACITOR HYBRID ENERGY STORAGE SYSTEM ARCHITECTURE FOR MILD-

HYBRID POWER SYSTEMS

Subbarao Varigonda

Date 48/2019

Attorney Docket No.: CI-18-0465-01-US Page 3 of 4

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Towards I	
Jaroslaw Leonarski	
Date	

Attorney Docket No.: CI-18-0465-01-US Page 4 of 4

First Named Inventor: Subbarao Varigonda

Title: A BATTERY-ULTRACAPACITOR HYBRID ENERGY

STORAGE SYSTEM ARCHITECTURE FOR MILD-

HYBRID POWER SYSTEMS

Harsha R. Ademane

Date

Attorney Docket No.: CI-18-0465-01-US P

Page 1 of 4

First Named Inventor: Subbarao Varigonda

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A BATTERY-ULTRACAPACITOR HYBRID ENERGY STORAGE SYSTEM ARCHITECTURE FOR MILD-

HYBRID POWER SYSTEMS

WHEREAS, we, Subbarao Varigonda, residing at 2886 Macintosh, Columbus, Indian	a 47201:
Jaroslaw Leonarski, residing at 4013 W North Wood Lake Drive, Columbus, Indiana 47201: a	ınd
Harsha R. Ademane, residing at 7309 Windsor Lakes Place, Indianapolis, Indiana 46237, have	invented
certain new and useful improvements in an invention titled A BATTERY-ULTRACAPACITO	OR
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NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, we hereby assign, convey, and transfer to Assignee our entire worldwide rig ht, title, and interest in and to the invention, the Application, domestic and foreign patent applications claiming priority to the Application (including non-provisionals, provisionals, divisionals, continuations, and continuations-in-part), all Letters Patent and registrations issuing thereon, and all rights and benefits under any applicable treaty or convention; and we authorize the Commissioner of Patents and Trademarks of the United States or foreign equivalent thereof to issue the aforementioned the Letters Patent, registrations, and/or rights and benefits in any form, to Assignee.

We authorize Assignee, its successors and assigns, or anyone Assignee may properly designate, to (1) insert in this instrument the filing date and application number of the Application when ascertained, if applicable, (2) apply for Letters Patent, registrations, and all rights and benefits in any form in its own name in any and all countries, and (3) record this assignment agreement in any governmental office of any country having granted said Letters Patents, registrations, and/or rights and benefits, and (4) assign this agreement without further consideration.

We represent to Assignee that we have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. We agree that we, or our executors or administrators, will at any time upon request, without additional consideration but at the expense of Assignee, execute such additional writings and do such additional acts as Assignee may deem desirable to perfect its enjoyment of this grant, and render all assistance in making application for and obtaining, maintaining, and enforcing the Letters Patent or similar legal protection on the invention in any and all countries.

Attorney Docket No.: CI-18-0465-01-US Page 2 of 4

First Named Inventor: Subbarao Varigonda

Title: A BATTERY-ULTRACAPACITOR HYBRID ENERGY STORAGE SYSTEM ARCHITECTURE FOR MILD-

Subbarao Varigonda	
Date	

Attorney Docket No.: CI-18-0465-01-US

Page 3 of 4

First Named Inventor: Subbarao Varigonda

Title:

A BATTERY-ULTRACAPACITOR HYBRID ENERGY STORAGE SYSTEM ARCHITECTURE FOR MILD-

HYBRID POWER SYSTEMS

Jaroslaw Leonarski

Date 3/29/2019

Attorney Docket No.: CI-18-0465-01-US Page 4 of 4

First Named Inventor: Subbarao Varigonda

Title: A BATTERY-ULTRACAPACITOR HYBRID ENERGY STORAGE SYSTEM ARCHITECTURE FOR MILD-

Harsha R. Ademane	
Date	

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Hortston

Harsha R. Ademane

Date 4/2/2019

US.121993020.01

RECORDED: 08/23/2021