PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5869471

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
BRIAN KURAS	09/30/2019
ANKIT SHARMA	09/30/2019
LANCE COWPER	10/01/2019

RECEIVING PARTY DATA

Name:	CATERPILLAR INC.
Street Address:	100 NE ADAMS STREET
City:	PEORIA
State/Country:	ILLINOIS
Postal Code:	61629-9510

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16675721

CORRESPONDENCE DATA

Fax Number:

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: 5714320800

Email: kpaige@harrityllp.com
Correspondent Name: HARRITY & HARRITY, LLP
Address Line 1: 11350 RANDOM HILLS ROAD

Address Line 2: SUITE 600

Address Line 4: FAIRFAX, VIRGINIA 22030

ATTORNEY DOCKET NUMBER:	19-0453-72441
NAME OF SUBMITTER:	SARA STESNEY
SIGNATURE:	/Sara Stesney/
DATE SIGNED:	12/16/2019

Total Attachments: 4

source=19-0453-72441 Assignment#page1.tif source=19-0453-72441 Assignment#page2.tif source=19-0453-72441 Assignment#page3.tif

PATENT 505822641 REEL: 051293 FRAME: 0763

source=19-0453-72441 Assignment#page4.tif

PATENT REEL: 051293 FRAME: 0764

SOLE/JOINT INVENTION (Worldwide Rights) Attorney Docket No. 0101-0191 Client Ref. No. 19-0453-72441

ASSIGNMENT

WHEREAS I/We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have made an invention currently entitled:

CONTROL SYSTEM FOR DC BUS REGULATION

for which I/We will or have filed a patent application; and

WHEREAS, Caterpillar Inc., a corporation of Delaware whose post office address is 100 NE Adams Street, Peoria IL 61629-9510 US (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention, and in and to the patent application for this invention and any and all patents to be issued upon this application throughout the world;

NOW THEREFORE, be it known that for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention, and this application, and all divisions, and continuations thereof, and all patents which may be granted thereon, and all reissues thereof, as well as all rights to claim priority in any country or jurisdiction or patent office on the basis of this application, and all applications for patents which may hereafter be filed for this invention in any country or jurisdiction or patent office, and all patents which may be granted on this invention in any country or jurisdiction or patent office, and all extensions, renewals, and reissues thereof; and I/We hereby authorize and request any official of any country or jurisdiction or patent office whose duty it is to issue patents on applications as described above, to issue all patents for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in any country or jurisdiction or patent office, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns;

AND, I/WE HEREBY authorize the attorneys/representatives that I/WE have empowered to prosecute this application to insert here in parentheses the country, application number, and official filing date ($\underline{\text{US}}$ Application No. $\underline{16/675,721}$, filed $\underline{\text{November 6, 2019}}$).

SOLE/JOINT INVENTION (Worldwide Rights) Altorney Docket No. 0101-0191 Client Ref. No. 19-0453-72441

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

FULL NAME OF SOLE OR FIRST ASSIGNOR	ASSIGNOR'S SIGNATURE	DATE
Brian KURAS	Buon D. Huns	9/30/2019
ADDRESS 1258 N. Skyview Dr., East Peoria, IL 61611 US		CITIZENSHIP
1. WI'NESS NAME	WITNESS SIGNATURE	DATE
Kenth Leisinger	19/1/ Lan	9/30/209
ADDRESS //315 N FOX MEADER OR		CITIZENSHIP
BRIMFIELD, IZ	6(517	
2. WITNESS NAME	WITNESS SIGNATURE	DATE
Carles & None.		9/ 30/20/9
ADDRESS	compat Co	CITIZENSHIP
Calenson and s	6/6/2	

SOLE/JOINT INVENTION (Worldwide Rights) Attorney Docket No. 0101-0191 Client Ref. No. 19-0453-72441

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

FULL NAME OF ASSIGNOR Ankit SHARMA	ASSIGNORA SIGNATURE	0416 9/30/2019
ADDRESS 2215 W Willow Knolls Dr, Apt 707C, Peoria IL 61614 US		CITIZENSHIP Nepal
1. WITNESS NAME Keifs LOSIOSE	WITNESS SIGNATURE	DATE 9/2019
ADDRESS //3/5 // GX MCAOU	<u> </u>	CITIZENSHIP
BRIMERED, IL	61517	
2. WITNESS NAME ADDRESS ACCORDED TO SERVICE STATEMENTS	witness signature	DATE 9/30/20/9 CHIZENSHIP
<u> </u>		1/

SOLE/JOINT INVENTION (Worldwide Rights) Attorney Docket No. 0101-0191 Client Ref. No. 19-0453-72441

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

FULL NAME OF ASSIGNOR	ASSIGNOR'S SIGNATURE	DATE
Lance COWPER	Janu M. Canper	10/1/19
ADDRESS 1495 County Rd. 1050 East, Metamora IL 61548 US		CITIZENSHIP US
1. WITNESS NAME	WITNESS SIGNATURE	DATE
Brian Krug	Rivitea	10/1/19
ADDRESS		CITIZENSHIP
2201 Mitchell Drive, Eureka 11 61530		USA
2. WITNESS NAME	WITNESS SIGNATURE	DATE
Brandon Schwoerer		16/1/2019
ADDRESS		CITIZENSHIP
729 Pintail Ln Washingto	n, IL 61571	USA