PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
REBECCA W. DREASHER	12/17/2018
STEPHEN CRAVEN	12/19/2018
MATTHEW STEVEN VRBA	12/17/2018

RECEIVING PARTY DATA

Name:	WESTINGHOUSE AIR BRAKE TECHNOLOGIES CORPORATION
Street Address:	1001 AIR BRAKE AVENUE
City:	WILMERDING
State/Country:	PENNSYLVANIA
Postal Code:	15148

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16220959

CORRESPONDENCE DATA

Fax Number: (412)471-4094

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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Correspondent Name: THE WEBB LAW FIRM

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Address Line 2: ONE GATEWAY CENTER

Address Line 4: PITTSBURGH, PENNSYLVANIA 15222

ATTORNEY DOCKET NUMBER: 4293-1804417

NAME OF SUBMITTER: RICHARD L. BYRNE, REG. NO. 28,498

SIGNATURE: /richard I. byrne/

DATE SIGNED: 03/08/2019

Total Attachments: 5

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> PATENT REEL: 048543 FRAME: 0444

Application No	16/220,959
Attorney Docket No	4293-1804417

ASSIGNMENT
WHEREAS, as a below named inventor, I have invented certain new and useful improvements in
SECURE LOCOMOTIVE TO LOCOMOTIVE PTC COMMUNICATION
(Invention Title)
for which a United States Provisional Patent application was filed on(mm/dd/yyyy) and bears Application Number (hereinafter "said application"). AND/OR
for which I have this day executed an application for a United States Patent (hereinafter "said application"). AND/OR
X for which an application for a United States Patent was filed on 12/14/2018 (mm/dd/yyyy) and bears Application Number 16/220,959 (hereinafter "said application"). AND/OR
for which an international patent application was filed under the Patent Cooperation Treaty on(mm/dd/yyyy), bearing Application No (hereinafter "said application").
AND, WHEREAS, WESTINGHOUSE AIR BRAKE TECHNOLOGIES CORPORATION, a corporation of Delaware, having a place of business at 1001 Air Brake Avenue, Wilmerding, PA 15148, hereinafter called the "assignee", is desirous of acquiring the entire right, title, and interest in and to said application and the inventions and improvements therein disclosed.
NOW, THEREFORE, for good and valuable consideration paid to me by said assignee, the receipt of which is hereby acknowledged, I as the inventor or as one of the inventors, hereinafter the assignor(s), do hereby assign, sell and transfer unto said assignee the full and exclusive right, title and interest in and to said application and the inventions and improvements therein disclosed for the United States and all foreign countries, including rights of priority under the International Convention of Paris (1883) as amended, and any Letters Patent which may issue therefor in the United States and all foreign countries and all divisionals, non-provisionals, reissues, continuations, continuations-in-part, renewals and/or extensions thereof. Such assignment extends to the full ends of the terms of these applications and patents as fully and entirely as the same would have been held and enjoyed by me had this Assignment not been made.
I covenant that I am the lawful owner(s) of said application, inventions and improvements, that the same are unencumbered, that no license has been granted to make, use or vend the said inventions or improvements or any of them, and that I have the full right to make this Assignment.

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And for the consideration aforesaid, I agree individually and, if applicable, jointly that I will communicate to said assignee or the representatives thereof any facts known to me respecting said inventions and improvements, and will, upon request but without expense to me,

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testify in any legal proceedings, sign all lawful papers, execute all divisional, non-provisional reissue, continuation, continuation-in-part, renewal and/or extension applications, make all rightful oaths, and generally do all other and further lawful acts deemed necessary or expedient by said assignee or by counsel for said assignee to assist or enable said assignee to obtain and enforce full benefits from the rights and interests herein assigned. This Assignment shall be binding upon my heirs, executors, administrators and/or assigns, and shall inure to the benefit of the heirs, executors, administrators, successors and/or assigns, as the case may be, of said assignee.

1. FULL NAME OF ASSIGNO

RESIDENCE:

Rebecca W. Dreasher

Longmont, CO

EXECUTED this 17th day of December 2018

SIGNATURE

WITNESS:

Name:

SARAH L. BARTUSEK
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20174000115

X Checked Box indicates 3 additional pages.

	Application No. <u>16/220,959</u>
	Attorney Docket No. 4293-1804417
2. FULL NAME OF ASSIGNOR: Stephen Craven	RESIDENCE: Hiawatha, IA
EXECUTED this / Maday of Decimber	-, 2018 Adam (

	Attorney Docket No. 4293-1804417
3. FULL NAME OF ASSIGNOR: Matthew Steven Vrba	RESIDENCE: Marion, IA
EXECUTED this 17 day of December	

Application No. ______16/220,959

SIGNATURE

Name:

Application No. 16/220,959 Attorney Docket No. <u>4293-1804417</u>

Acknowledgement of this Assignment is made by/on behalf of the Assignee:

NAME OF ASSIGNEE:

PLACE OF BUSINESS:

WESTINGHOUSE AIR BRAKE **TECHNOLOGIES CORPORATION**

Wilmerding, PA

EXECUTED this 7 day of Seb-7, 2019

Name: David M. Seitz Title: Vice President

and Senior Counsel

WITNESS: