# 502708744 03/06/2014

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2755349

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

## **CONVEYING PARTY DATA**

Name	Execution Date
JOHN ZHOU	01/22/2014
ROGER J. VOORHIS	01/25/2014
THOMAS J. CLANIN	01/22/2014

## **RECEIVING PARTY DATA**

Name:	TRANE INTERNATIONAL INC.
Street Address:	ONE CENTENNIAL AVENUE
City:	PISCATAWAY
State/Country:	NEW JERSEY
Postal Code:	08855

# PROPERTY NUMBERS Total: 1

Property Type	Number
PCT Number:	US2013077203

## **CORRESPONDENCE DATA**

 Fax Number:
 (612)455-3801

 Phone:
 6124553800

 Email:
 hhetue@hsml.com

Correspondence will be sent via US Mail when the email attempt is unsuccessful.

Correspondent Name: HAMRE, SCHUMANN, MUELLER & LARSON, P.C.

Address Line 1: PO BOX 2902

Address Line 4: MINNEAPOLIS, MINNESOTA 55402

ATTORNEY DOCKET NUMBER:	20424.0005WOU1	
NAME OF SUBMITTER:	BRYAN A. WONG	
Signature:	/Bryan A. Wong/	
Date:	03/06/2014 <b>PATENT</b>	

502708744 REEL: 032362 FRAME: 0233

Total Attachments: 4

source=Assignment\_0005WOU1#page1.tif source=Assignment\_0005WOU1#page2.tif source=Assignment\_0005WOU1#page3.tif source=Assignment\_0005WOU1#page4.tif

> PATENT REEL: 032362 FRAME: 0234

### ASSIGNMENT

WHEREAS, we, John Zhou, residing at 1046 Canary Lane, Onalaska, Wisconsin 54650; Roger J. Voorhis, residing at 3182 Quincy Lane, Clarksville, Tennessee 37043; and Thomas J. Clanin, residing at 1383 East Lane, La Crescent, Minnesota 55947, made certain new and useful inventions and improvements for which we filed Patent Cooperation Treaty International Application on December 20, 2013, that has application no. PCT/US2013/077203 and which is entitled SYSTEM AND METHOD FOR CONTROLLING A SYSTEM THAT INCLUDES VARIABLE SPEED COMPRESSOR.

AND WHEREAS, TRANE INTERNATIONAL INC., a corporation organized and existing under and by virtue of the laws of Delaware, and having an office and place of business at One Centennial Avenue, Piscataway, New Jersey 08855 (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor:

NOW THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to any applications which have been or shall be filed, including all nonprovisionals, applications filed under the Patent Cooperation Treaty, divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the Assignee, its successors and assigns.

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and

PATENT REEL: 032362 FRAME: 0235 the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

Jan	IN TESTIMONY WHEREON	, I have hereunto set my hand this Zad day of
		Inventor: John Zhou
	IN TESTIMONY WHEREOI	F, I have hereunto set my hand this day of
	, 20	
		Inventor: Roger J. Voorhis
January	IN TESTIMONY WHEREON	, I have hereunto set my hand this <u>22</u> day of
¥		Inventor: Thomas A. Clanin

2

### ASSIGNMENT

WHEREAS, we, John Zhou, residing at 1046 Canary Lane, Onalaska, Wisconsin 54650; Roger J. Voorhis, residing at 3182 Quincy Lane, Clarksville, Tennessee 37043; and Thomas J. Clanin, residing at 1383 East Lane, La Crescent, Minnesota 55947, made certain new and useful inventions and improvements for which we filed Patent Cooperation Treaty International Application on December 20, 2013, that has application no. PCT/US2013/077203 and which is entitled SYSTEM AND METHOD FOR CONTROLLING A SYSTEM THAT INCLUDES VARIABLE SPEED COMPRESSOR.

AND WHEREAS, TRANE INTERNATIONAL INC., a corporation organized and existing under and by virtue of the laws of Delaware, and having an office and place of business at One Centennial Avenue, Piscataway, New Jersey 08855 (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to any applications which have been or shall be filed, including all nonprovisionals, applications filed under the Patent Cooperation Treaty, divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and

PATENT REEL: 032362 FRAME: 0237 the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignce, its successors or assigns the entire right, title and interest in and to the improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

IN TESTIMONY WHEREOF, I have hereunto set my hand this day of, 20	
Inventor: John Zhou	
IN TESTIMONY WHEREOF, I have hereunto set my hand thisZ5_ day of	
Javuseg , 20 14:  July Inventor: Roger J. Voorhis	
IN TESTIMONY WHEREOF, I have hereunto set my hand this day of, 20	
Inventor: Thomas J. Clanin	