

<b>PATENT ASSIGNMENT COVER SHEET</b>
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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
XINGHUA HUANG	11/22/2011
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	CARRIER AIR CONDITIONING AND REFRIGERATION R&D MANAGEMENT (SHANGHAI) CO., LTD.
<b>Street Address:</b>	3239 SHENJIANG ROAD
<b>Internal Address:</b>	PUDONG DISTRICT
<b>City:</b>	SHANGHAI
<b>State/Country:</b>	CHINA
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14349138
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(860)286-0115
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	8602862929
<b>Email:</b>	bstoeckel@cantorcolburn.com
<b>Correspondent Name:</b>	CANTOR COLBURN LLP - CARRIER
<b>Address Line 1:</b>	20 CHURCH STREET, 22ND FLOOR
<b>Address Line 4:</b>	HARTFORD, CONNECTICUT 06103
<b>ATTORNEY DOCKET NUMBER:</b>	PA-0016716-US-AA
<b>NAME OF SUBMITTER:</b>	VICTOR KERNUS
<b>SIGNATURE:</b>	/Victor Kernus/
<b>DATE SIGNED:</b>	04/02/2014
<b>Total Attachments: 2</b>	
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source=72K3420#page2.tif	

ASSIGNMENT

I, XingHua Huang of Room 1702, No. 9, Lane 380, Wuzhong Road, Shanghai, China 201103 have invented certain improvements in a SHELL AND TUBE HEAT EXCHANGER, and described in U.S. Patent Application Serial No. 61/561,507, filed November 18, 2011, and International Application Docket No. PA-0016716-WO, executed on even dated herewith and listing as inventors: **Jack Leon Esformes, XingHua Huang, Marcel Christians, Satyam Bendapudi, Sean P. Breen, and Salim Babattin Yilmaz** (hereinafter the Application(s)) and for which International Application we authorize insertion post-execution here in parentheses (PCT/US12/65218 filed November 15, 2012) the international filing date and International Application number when known.

At the time of the invention of the improvements, I was employed by **Carrier Air Conditioning and Refrigeration R&D Management (Shanghai) Co., Ltd.** (hereinafter Assignee), a limited liability company organized and established under the laws of PRC, with registered office at 3239 Shenjiang Road, Pudong District, Shanghai, China. By such employment, said improvements were assigned to Assignee.

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged by the undersigned, the undersigned have sold, assigned, transferred and set over and by these presents do hereby sell, assign, transfer and set over unto Assignee, its successors and assigns, our entire right, title and interest in and to:

said invention or inventions as described in the Application(s), in all forms and embodiments thereof and in all countries and other jurisdictions;

the Application(s) and all applications filed in all countries and jurisdictions based thereon or otherwise for said invention or inventions, including direct or indirect nonprovisional of, divisional, continuation, continuation-in-part, or substitute applications, and including the right to file all said applications under the provisions of the Paris Convention for the Protection of Industrial Property, Patent Cooperation Treaty or other international convention or agreement;

all patents and reissues, reexaminations, or extensions thereof to be obtained in all countries and jurisdictions upon said invention or inventions or from all said applications; and

all such rights relating to prior infringements, retroactive or past royalties, provisional rights, and other retroactive or past relief or compensation.

The undersigned hereby authorize and request the issuing authorities in all countries and jurisdictions to issue all patents on all said applications to Assignee or its successors and assigns.

The undersigned further agree, without any further payment or compensation by Assignee or its successors and assigns, to communicate to Assignee, its successors and assigns and to their representatives and agents, all facts relating to said invention or inventions including evidence for interference purposes or for other legal proceedings whenever requested; testify in all interference or other legal proceedings, whenever requested; execute and deliver, on request, all lawful papers required to make all of the foregoing provisions effective; and generally do everything possible to aid Assignee, its successors or assigns and nominees to obtain and enforce proper patent protection for said invention or inventions in all countries and jurisdictions.

IN TESTIMONY WHEREOF, the undersigned have-hereunto set their hand and seal on the date after their signature.

(L.S.) Xinghua Huang  
Xinghua Huang

Nov. 22, 2011  
Date