U.S. PTO 12/801821 06/28/2010

Form PTO-1595 (Rev. 03-09) OMB No. 0651-0027 (exp. 03/31/2009)	07-08-	-2010 U.S. DEPARTMENT OF CO		
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To the Director of the U.S. Patent an	10360	1484 cuments or the new address(es)	belov	
1. Name of conveying party(ies):		2. Name and address of receiving party(ies)		
Naohisa Higashiyama (05/18/2010) and Hokuto Mine (05/18/2010)  Additional name(s) of conveying party(ies) attached? Yes X No		Name: SHOWA DENKO K.K.		
		Internal Address:		
		Street Address:		
3. Nature of conveyance/Execution Date	ə(s):	1		
Execution Date(s): in parentheses after inventor name  X Assignment Merger Change of Name  Security Agreement Joint Research Agreement		13-9, Shiba Daimon 1-chome, Minato-ku		
		Tokyo 105-8518 JAPAN  City:		
				Government Interest Assignment
Executive Order 9424, Confirmatory License  Other		Country: Zip:		
		Additional negative section [ ]	No	
		attached?		
	nal numbers attached			
5. Name and address to whom correspondence concerning document should be mailed:		6. Total number of applications and patents involved:		
Name: James E. Armstr	•			
EDWARDS ANGELL PALMER & DODGE LLP		7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.0	n	
	60)	7. Total 100 (37 OFK 1.21(II) & 3.41) \$		
Internal Address: Atty. Dkt.: 86679(302960) Street Address: P.O. Box 55874				
-		x Authorized to be charged to deposit account		
		Enclosed		
	,	None required (government interest not affect	ting	
City: Boston		8. Payment Information		
State: MA Zij				
Phone Number: (202) 478-				
Fax Number: (866) 658-1		Deposit Account Number 04-1105	13.5	
Email Address: jarmstrong@ea	apdlaw.com	Authorized User Name James E. Armstrong	, IV	
9. Signature:	-+ IP.	97/07/2010 MJAMA1 00000036 041105	10	
Vauuse XI	untrong	91 FC:8021 49.86 NA 2010		
Sig	nature	Date		
James E. Armstron		Total number of pages including cover sheet, attachments, and documents:	3	

**PATENT** 

REEL: 024648 FRAME: 0552

## ASSIGNMENT BY INVENTOR

THIS ASSIGNMENT, made this 18th day of May, 2010, by Naohisa HIGASHIYAMA and Hokuto MINE(hereinafter referred to as Assignor), residing at c/o SHOWA DENKO K.K., OYAMA REGIONAL OFFICE, 480, Inuzuka 1-chome, Oyama-shi, Tochigi 323-8678 Japan;

WHEREAS, Assignor has invented certain new and useful improvements in DOUBLE-WALL-TUBE HEAT EXCHANGER, set forth in a Patent application for Letters Patent of the United States, filed herewith or if not filed herewith, being earlier filed on and having Serial No.; and

WHEREAS, SHOWA DENKO K.K., a Corporation organized under and pursuant to the laws of Japan having its principal place of business at 13-9, Shiba Daimon 1-chome, Minato-ku, Tokyo 105-8518 Japan (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefore and thereon.

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, Assignor has sold, assigned, transferred and set over, and by these presents does sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuations-in-part of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefore and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignor, had this sale and assignment not been made.

AND for the same consideration, Assignor hereby represents and warrants to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignor is the sole and lawful owner of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignor has good and full right and lawful authority to sell and convey the same in the manner herein set forth.

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PATENT REEL: 024648 FRAME: 0553 AND for the same consideration, Assignor hereby covenants and agrees to and with Assignee, its successors, legal representatives and assigns, that Assignor will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuationin-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

AND Assignor hereby requests the Commissioner of Patent and Trademarks to issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns.

AND Assignor hereby grants the following individuals the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document:

## EDWARDS ANGELL PALMER & DODGE LLP

All practitioners at Customer Number 21874

AND Assignor acknowledges an obligation of assignment of this invention to Assignee at the time the invention was made.

18 May 2010	Nachisa Hisrishiyana
Date	Name: Nachisa Higashiyama  Name: Nachisa Higashiyama
18 May 2010	Hokuto Mine
Date	Name: Hokuto MINE

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RECORDED: 06/28/2010

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