

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3646344

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ERIC PAUL LOEWEN	12/01/2015
SETH RYAN PAUL STREGE	11/30/2015
NICHOLAS FRANCIS O'NEILL	12/01/2015
COLIN CHRISTOPHER O'CONNOR	12/01/2015
CHELSEA ANN CURTIN	12/01/2015
EDWIN WU	11/30/2015
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	GE-HITACHI NUCLEAR ENERGY AMERICAS LLC
<b>Street Address:</b>	3901 CASTLE HAYNE ROAD
<b>City:</b>	WILMINGTON
<b>State/Country:</b>	NORTH CAROLINA
<b>Postal Code:</b>	28401
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14960511
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(703)668-8200
<i>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.</i>	
<b>Phone:</b>	703-668-8000
<b>Email:</b>	dcmalroom@hdp.com
<b>Correspondent Name:</b>	HARNESS, DICKEY & PIERCE, P.L.C.
<b>Address Line 1:</b>	P.O. BOX 8910
<b>Address Line 4:</b>	RESTON, VIRGINIA 20195
<b>ATTORNEY DOCKET NUMBER:</b>	8564-000339-US
<b>NAME OF SUBMITTER:</b>	GARY D. YACURA, REG. #35,416
<b>SIGNATURE:</b>	/Gary D. Yacura Reg. No. 35416/
<b>DATE SIGNED:</b>	12/07/2015
<b>Total Attachments: 8</b>	

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**COMBINED DECLARATION AND GLOBAL ASSIGNMENT  
FOR UTILITY OR DESIGN PATENT APPLICATION**

As the below named inventor(s), I/we hereby declare that:

This declaration and assignment are directed to:

**PIPING ENHANCEMENT FOR BACKFLOW PREVENTION IN A MULTIPLE LOOP,  
METAL COOLED NUCLEAR REACTOR SYSTEM**

- the specification of which is attached hereto OR
- United States application or PCT international application number \_\_\_\_\_ filed on \_\_\_\_\_, as amended on [date] (if applicable).  
(We hereby authorize and request the Company or its delegated attorneys or agents to insert above the application number and filing date of the application when known.)

The above-identified application was made or authorized to be made by us.

We believe that we are original joint inventors of a claimed invention in the application.

We hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC § 1001 by fine or imprisonment of not more than five (5) years, or both.

We have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR § 1.56, including, for continuation-in-part applications, material information which became available between the filing date of the prior application and the filing date of the continuation-in-part application.

In accordance with our obligation(s) under an Employee Innovation and Proprietary Information Agreement or (as applicable) arising out of other agreements (such as, but not limited to, the Services Agreement between GE-Hitachi Nuclear Energy Americas LLC, a Delaware Limited Liability Company, and our employers), and/or for other good and valuable consideration of which we acknowledge receipt, we,

Inventor First Name	Inventor Middle Name	Inventor Last Name		Residence Town	Residence State	Residence Country
Eric	Paul	LOEWEN	of	Wilmington	NC	USA
Seth	Ryan Paul	STREGE	of	Wilmington	NC	USA
Nicholas	Francis	O'NEILL	of	Alpharetta	GA	USA
Colin	Christopher	O'CONNOR	of	Atlanta	GA	USA
Chelsea	Ann	CURTIN	of	Atlanta	GA	USA
Edwin		WU	of	Houston	TX	USA

hereby sell and assign to:

Name of Company: <i>GE-Hitachi Nuclear Energy Americas LLC</i>
Entity Type (optional): <i>Delaware Limited Liability Company</i>
Address: <i>3901 Castle Hayne Road, Wilmington, NC 28401</i>

herein referred to as "Company", its successors and assigns our entire respective rights, titles and interests in and to the invention and improvements made or conceived by us described in the application(s) listed above and in the following table:

Country of Filing	Type of Filing	Application Number	Filing Date	Title

(We hereby authorize and request the Company or its delegated attorneys or agents to insert above the application number and filing date of the application(s) when known.)

and any and all applications for patent and patents therefrom in any and all countries, including all divisions, continuations, continuations-in-part, reexaminations, renewals, and reissues thereof, and all rights of priority resulting from the filing of the application(s), and authorize and request any official whose duty it is to issue patents, to issue any patent on the inventions and improvements resulting therefrom to the Company, or its successors or assigns, and agree that on request and without further consideration, we will communicate to the Company or its representatives or nominees any facts known to us respecting the inventions and improvements and testify in any legal proceeding, make all rightful oaths, sign all lawful papers and execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights in all countries including, but not limited to, any provisional, non-provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, for any derivation proceedings relating thereto, and, as to any patents that issue from such applications, for any supplemental examination, derivation proceeding, opposition, post grant review, reissue, re-examination, inter parties review, or extension thereof, and generally do everything possible to aid the Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for the invention and its improvements in all countries.

Remuneration claims of the inventor(s)/assignor(s) potentially arising from German Law on Employee Inventions, or any other respective country law, remain unaffected by this assignment.

INVENTOR 1

Signature: *Eric Paul Loewen* Date: 01 DEC 15  
Eric Paul LOEWEN

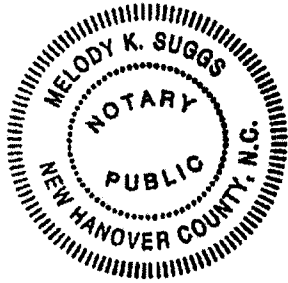
STATE OF North Carolina

ss.

COUNTY OF New Hanover

This 1<sup>st</sup> day of December, 2015 before me personally came the above-named **Eric Paul LOEWEN**, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he executed the same of his own free will for the purposes therein set forth.

Seal



*Melody K. Suggs*  
(Notary Public)

My commission expires: 01-15-2019

INVENTOR 2

Signature: *Seth Ryan Paul Strege*  
Seth Ryan Paul STREGE

Date: 11/30/15

STATE OF North Carolina

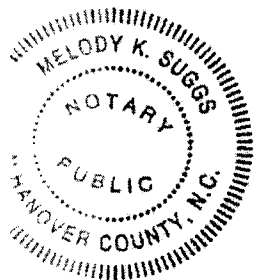
ss.

COUNTY OF New Hanover

This 30 day of November, 2015 before me personally came the above-named **Seth Ryan Paul STREGE**, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he executed the same of his own free will for the purposes therein set forth.

Seal

*Melody K. Suggs*  
(Notary Public)



My commission expires: 01-15-2019

INVENTOR 3

Signature:   
Nicholas Francis O'NEILL

Date: 12/1/2015

Witnessed by:   
Signature

Date: 12/1/2015

John D. Sackellares  
Printed Name of Witness

Witnessed by:   
Signature

Date: 12/1/2015

NIKHIL Y. SAWE  
Printed Name of Witness

INVENTOR 4

Signature:   
Colin Christopher O'CONNOR

Date: 12/1/15

Witnessed by:   
Signature

Date: 12/1/15

ALEX PISONERI  
Printed Name of Witness

Witnessed by:   
Signature

Date: 12/1/15

Jose O'Connor  
Printed Name of Witness



INVENTOR 5

Signature: Chelsea Ann Curtin  
Chelsea Ann CURTIN

Date: 12/1/15

Witnessed by: [Signature]  
Signature

Date: 12/1/15

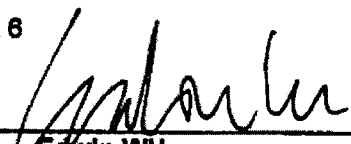
Alex Pinner  
Printed Name of Witness

Witnessed by: [Signature]  
Signature

Date: 12/1/15

Tom O'Connell  
Printed Name of Witness

INVENTOR 6

Signature:   
Edwin WU

Date: 4/30/15

Witnessed by:   
Signature

Date: 11/30/15

Lucy Kim  
Printed Name of Witness

Witnessed by:   
Signature

Date: 11/30/15

Krysten Kim  
Printed Name of Witness