

PATENT ASSIGNMENT

Electronic Version v1.1
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SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Paul D. Lucas</td> <td>06/03/2013</td> </tr> <tr> <td>Gordon Hill</td> <td>05/24/2013</td> </tr> <tr> <td>Jaroslav W. Pisera</td> <td>05/24/2013</td> </tr> </tbody> </table>		Name	Execution Date	Paul D. Lucas	06/03/2013	Gordon Hill	05/24/2013	Jaroslav W. Pisera	05/24/2013		
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RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>MKS Instruments, Inc.</td> </tr> <tr> <td>Street Address:</td> <td>2 Tech Drive, Suite 201</td> </tr> <tr> <td>City:</td> <td>Andover</td> </tr> <tr> <td>State/Country:</td> <td>MASSACHUSETTS</td> </tr> <tr> <td>Postal Code:</td> <td>01810</td> </tr> </table>		Name:	MKS Instruments, Inc.	Street Address:	2 Tech Drive, Suite 201	City:	Andover	State/Country:	MASSACHUSETTS	Postal Code:	01810
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PROPERTY NUMBERS Total: 1											
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13753019</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13753019						
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CORRESPONDENCE DATA											
Fax Number: 2027568087 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> Phone: 6175354000 Email: ptedesco@mwe.com Correspondent Name: McDermott Will & Emery LLP Address Line 1: 500 North Capitol Street, N.W. Address Line 4: Washington, DISTRICT OF COLUMBIA 20001											
ATTORNEY DOCKET NUMBER:	086400-0920 (MKS-205)										
NAME OF SUBMITTER:	Toby H. Kusmer										
Signature:	/Toby H. Kusmer/										
Date:	06/03/2013										

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Total Attachments: 4

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PATENT

REEL: 030534 FRAME: 0526

ASSIGNMENT OF PATENT RIGHTS

We, **Paul D. Lucas** residing at **254 Porter Street, Melrose, MA 02176**, **Gordon Hill**, residing at **175 Lowell Street, Arlington, MA 02475**, and **Jaroslaw W. Pisera**, residing at **6200 Habitat Drive, Boulder, CO 80301**, having invented improvements in **FLUID CONTROL VALVES**, and having this day executed a patent application for United States patent describing the same based thereon (and We hereby authorize our attorney(s), authorized to prosecute **U.S. Application Serial No. 13/753,019, Filed January 29, 2013**, for good and valuable consideration, receipt of which is hereby acknowledged from **MKS Instruments, Inc., a Massachusetts corporation** having its principal place of business at **2 Tech Drive, Suite 201, Andover, MA 01810** (and hereinafter called the Assignee, which term shall include its successors and assigns), do hereby sell, assign and transfer unto the Assignee, our entire right, title, and interest, in and throughout the United States of America (including its territories and dependencies) and all countries foreign thereto, in and to and under said application (which term shall include hereinafter where the context so admits all divisional, continuing, reissue and other patent applications based thereon) and the inventions (which term shall include each and every such invention, or part thereof) therein described, and any and all patents and like rights of exclusion (including extensions thereof) of any country which may be granted on or for said inventions or on said application;

And for the same consideration we do also hereby sell, assign and transfer unto the Assignee all our rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty and all other treaties of like purpose in respect of said inventions and said application, and do hereby authorize the Assignee to apply in our name or in their own name (in a manner to be agreed upon by the Assignee) or their designee, for patents and like rights of exclusion on or for said inventions in all countries, claiming (if the Assignee so desires) the priority of the filing date of said application under the provisions of said Convention, Treaty or any such other Convention or Treaty;

And for the same consideration we do hereby agree for ourselves and for our respective heirs, executors and administrators, promptly upon request of the Assignee, to execute and deliver without further compensation any power of attorney, assignment, original, divisional, continuing, reissue or other application or applications for patent or patents or like rights of exclusion of any country, or other lawful documents and any further assurances that may be deemed necessary or desirable by the Assignee fully to secure to it said right, title, and interest as aforesaid in and to said inventions, application, and said several patents and like rights of exclusion, or any of them, all, however, at the expense of the Assignee;

And we do hereby authorize and request the Commissioner of Patents of the United States of America and the corresponding Official of each country foreign thereto to issue to the Assignee any and all patents and like rights of exclusion which may be granted in any country upon said application or on or for said inventions;

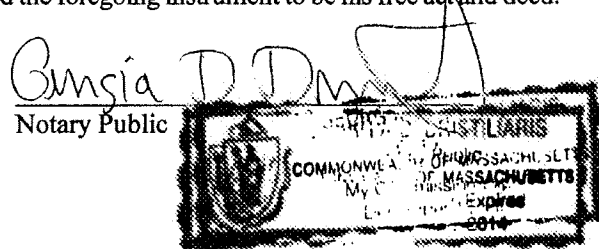
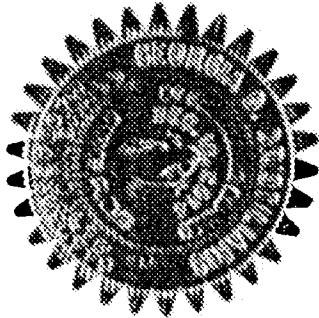
And we do hereby covenant for ourselves and for our respective legal representatives and agree with the Assignee that we have granted no right or license to make, use or sell said inventions to anyone except the Assignee, that prior to the execution of this deed my right, title and interest in and to said inventions has not been otherwise encumbered by us, and that we have not executed and will not execute any instrument in conflict herewith.

IN WITNESS WHEREOF, we hereunto set our hands and seal on the day and year hereinafter noted.

Paul D. Lucas
Paul D. Lucas

Commonwealth
State of Massachusetts
County of ESSEX) ss.

Before me this 3rd day of June, year of 2013, personally appeared **Paul D. Lucas**, who is to me personally known, and acknowledged the foregoing instrument to be his free act and deed.



WITNESS

Witness Signature: _____

Witness Name: _____

Witness Date: _____

Gordon Hill
Gordon Hill

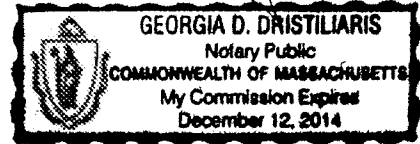
Commonwealth
State of Massachusetts
County of ESSEX ss.

Before me this 24th day of MAY, year of 2013, personally appeared Gordon Hill, who is to me personally known, and acknowledged the foregoing instrument to be his free act and deed.

Georgia D. Dristiliaris
Notary Public



WITNESS



Witness Signature: _____

Witness Name: _____

Witness Date: _____

J. Pisera
Jaroslaw W. Pisera

State of Colorado
County of Boulder ss.

Before me this 24 day of May, year of 2013, personally appeared **Jaroslaw W. Pisera**, who is to me personally known, and acknowledged the foregoing instrument to be his free act and deed.

Notary Public

Seal

WITNESS

Witness Signature: Erin C. McCarthy
Witness Name: ERIN C. MCCARTHY
Witness Date: 5/24/13