## 502540894 10/22/2013

## PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT			
NATURE OF CONVEYANCE:		ASSIGNMENT			
CONVEYING PARTY DATA					
No. 10 Figure 1 Pub.					
DAVID J COUMOU			lame	Execution Date 01/16/2012	
DAVID O CONICC					
RECEIVING PARTY DATA					
Name:	MKS INSTRUMENTS, INC.				
Street Address:	2 TECH DRIVE, SUITE 201				
City:	ANDOVER				
State/Country:		MASSACHUSETTS			
Postal Code:	01810				
PROPERTY NUMBERS Total: 1					
Property Type			Number		
Application Number:		140445	14044547		
CORRESPONDENCE DATA					
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ATTORNEY DOCKET NUMBER:			3197-000102-US-COA		
NAME OF SUBMITTER:			JENNIFER CATANESE		
Signature:			/Jennifer Catanese/		
Date:			10/22/2013		
Total Attachments: 4 source=Signed_Assignment_From_Parent_Case#page1.tif source=Signed_Assignment_From_Parent_Case#page2.tif source=Signed_Assignment_From_Parent_Case#page3.tif source=Signed_Assignment_From_Parent_Case#page4.tif					

PATENT REEL: 031451 FRAME: 0778

## ASSIGNMENT BY INVENTOR

THIS ASSIGNMENT, made by David J. Coumou (hereinafter referred to as Assignor), residing at 852 Arlberg Circle, Webster, New York 14580;

WHEREAS, Assignor has invented certain new and useful improvements in Power Distortion-Based Servo Control Systems For Frequency Tuning RF Power Sources, set forth in a Patent application for Letters Patent of the United States, already filed on December 29, 2011 as U.S. Application No. 13/339,494; and

WHEREAS, MKS Instruments, Inc., a Corporation organized under and pursuant to the laws of Delaware having its principal place of business at 2 Tech Drive, Suite 201, Andover, Massachusetts 01810 (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, for 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, including the right to recover for past infringements, 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

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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.

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 continuation-inpart 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.

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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:

HARNESS, DICKEY & PIERCE, P.L.C.

All practitioners at Customer Number 27572

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

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SUZANNE L. WANDTKE
Notary Public, State of New York
Qualified in Monroe County
My Commission Expires Feb 28, 20