| FORM PTO-1595 (Rev. 6-93) OMB No. 0651-0011 (exp. 4/94) | 08-20-19 | | HEET | U. S . D | | | OMMERCE emark Office | |
|--|--|---------------|---|-----------------|-------------|-----------|-------------------------|--|
| To the Honorable Commissioner of Pa | 1011243 | 56 | ached origi | nal docun | nents or | copy the | reof. | |
| 1. Name of conveying party(ies): | | 1 | nd address of rec | eiving pa | rty(ies): | | | |
| Joseph Maher Richard W. Olmsted | | Name: | MKS Instrume | ents, Inc. | | | | |
| Additional name(s) of conveying party(ies) attached? 3. Nature of conveyance: 8-16-9 | □ Yes ⊠ No 79 | Internal A | | Shattuck R | Road | | | |
| ⊠ Assignment | □ Merger | | | | | | | |
| Security Agreement Other | □ Change of Name | City: | Andover | State | MA | ZIP | 01810 | |
| Execution Date: August 3, 1999 | | Additional na | nme(s) & address atta | ched? | | res ⊠ | No | |
| 4. Application number(s) or patent number(s): | | 1 | | | | | | |
| 09/339,082 Filed June 23, 1999 Addi | tional numbers attached | ? □ Yes | 🛛 No | | | | | |
| 5. Name and address of party to whom correspondence concerning document should be mailed: | | | 6. Total number of applications and registrations 1 | | | | | |
| Name: Toby H. Kusmer, Esq. | | | | | | | | |
| Internal Address: Lappin & Kusmer LLP | | | 7. Total fee (37 CFR 3.41) <u>\$40.00</u> ⊠ Enclosed | | | | | |
| | | | □ Authorized to be charged to deposit account | | | | | |
| Street Address: 200 State Street | | | 8. Deposit Account Number: | | | | | |
| City: Boston State M | A ZIP 02109 | (Attach dupli | cate copy of this page | e if paying b | y deposit a | account) | | |
| 18/19/1999 NTHAI1 00000106 09339082 | DO NOT USE T | HIS SPACE | , | | | LIA | _ | |
| 9. Statement and signature: <i>To the best of my knowledge and belief, the for document.</i> Toby H. Kusmer, Reg. No. 26,418 | | ue and corre | ect and any attaci | hed copy a | | copy of . | _ | |
| Name of Person Signing Total number of pages incl | Signature uding cover sheet, attacl | ments, and | document 3 | | Date | <u>}</u> | | |

Mail documents to be recorded with required cover sheet information to: Commissioner of Patents and Trademarks, Box Assignments Washington, D.C. 20231

ASSIGNMENT OF PATENT RIGHTS

We, Joseph Maher and Richard W. Olmsted, residing respectively at 3 Virginia Place, Wenham, MA 01984, USA and 41 Windsor Blvd. Londonderry, NH 03053, USA, having invented improvements in Integrated Turbo Pump And Control Valve System, and having this date executed an application for United States patent describing the same and based thereon (authorizing our attorney(s), who are authorized to prosecute said application, to here insert the filing date and serial number of said application, when known, Serial No. 09/339,082, Filed June 23, 1999), for good and valuable consideration, receipt of which is hereby acknowledged from MKS Instruments, Inc. a Massachusetts Corporation having a principal place of business at Six Shattuck Road, Andover, MA 01810, USA and hereinafter referred to as the Assignee (which term shall include the successors and assigns), do hereby sell, assign and transfer to 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 all inventions (which term shall include each and every such invention, or any 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 we do hereby authorize the Assignee to apply in our names 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 jointly and severally 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 and Trademarks 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 jointly and severally 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 our 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 seals on the day and year hereinafter noted.

oseph Maher Richard W. Olmsted State of County of SS. , personally appeared Joseph Maher, who 10 19 Before me this, day of is to me personally known, and agknowledged the foregoing instrument to be his or her free act and deed. Notary Public JANET C. GIDDINGS Notary Public SEAL My Commission Expires State of County of SS. Before me this 2^{2} day of 2^{2} day of 3^{2} , 19^{2} , personally appeared **Richard W. Olmsted**, who is to me personally known, and acknowledged the foregoing instrument to be his or her free act and deed. Notary Public JANET C. GIDDINGS Notary Public My Commission Expires SEAL

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LAPPIN & KUSMER LLP Two Hundred State Street Boston, MA 02109 (617) 330-1300

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