

09-16-2004

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OMB No. 0651-0027 (exp. 6/30/2005)U.S. DEPARTMENT OF COMMERCE  
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To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

**1. Name of conveying party(ies)/Execution Date(s):**Sachio SHIMOHATA (07/16/2004), Masahiko  
MEGA (07/16/2004), Kimihiro KISHI (07/16/2004),  
and Seiji KATAYAMA (07/16/2004)

Execution Dates: in parentheses after inventor name

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No**3. Nature of Conveyance:**

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Government Interest Assignment  
☐ Executive Order 9424, Confirmatory License  
☐ Other \_\_\_\_\_

**2. Name and address of receiving party(ies)**

Name: Mitsubishi Heavy Industries, Ltd.

Internal Address: \_\_\_\_\_

Street Address: \_\_\_\_\_

16-5, Konan 2-chome, Minato-ku  
Tokyo  
108-8215  
JAPAN

City: \_\_\_\_\_

State: \_\_\_\_\_

Country: \_\_\_\_\_ Zip: \_\_\_\_\_

Additional name(s) & address(es) attached: ☐ Yes ☒ No**4. Application or patent number(s):**☒ This document is being filed together with a new application.

A. Patent Application No.(s)

NEW

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No**5. Name and address to whom correspondence concerning document should be mailed:**Name: Michael K. Mutter  
BIRCH, STEWART, KOLASCH & BIRCH,  
LLP

Internal Address: Atty. Dkt.: 2611-0223PUS1

Street Address: 8110 Gatehouse Rd  
Suite 100 East  
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State: VA Zip: 22040-0747

Phone Number: (703) 205-8000

Fax Number: (703) 205-8050

Email Address: mmutter@BSKB.com

**6. Total number of applications and patents involved:**

1

**7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00**

- ☐ Authorized to be charged to credit card  
☐ Authorized to be charged to deposit account  
☒ Enclosed  
☐ None required (government interest not affecting title)

**8. Payment Information:**a. Credit Card Last 4 Numbers \_\_\_\_\_  
Expiration Date \_\_\_\_\_b. Deposit Account Number \_\_\_\_\_  
Authorized User Name \_\_\_\_\_**9. Signature.**

Signature

September 8, 2004

Date

Michael K. Mutter - 29,680

Name of Person Signing

Total number of pages including cover  
sheet, attachments, and documents:

4

MKM/smt

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PATENT  
REEL: 015779 FRAME: 0329

202-0078  
2611-0223PUS1

BIRCH, STEWART, KOLASCH & BIRCH, LLP

UNITED STATES PATENT RIGHTS, OR  
UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

ATTORNEY DOCKET NO.  
2611-0223PUS1

ASSIGNMENT

Application No. NEW

Filed 9-8-04

Insert Name(s)  
of Inventor(s)

WHEREAS, Sachio SHIMOHATA and Masahiko MEGA of  
c/o TAKASAGO Research & Development Center, MITSUBISHI HEAVY INDUSTRIES, LTD.  
1-1, Arai-cho Shinhamma 2-chome, Takasago, Hyogo-ken 676-8686 Japan  
Kimihiro KISHI of  
c/o NAGOYA Guidance & Propulsion Systems Works, MITSUBISHI HEAVY INDUSTRIES, LTD.  
1200, O-aza, Higashi Tanaka, Komaki, Aichi-ken 485-8561 Japan  
and  
Seiji KATAYAMA of c/o Joining and Welding Research Institute Osaka University  
11-1, Mihogaoka, Ibaraki, Osaka 567-0047 Japan

Insert Title  
of Invention

(hereinafter designated as the undersigned) has (have) invented certain new and useful improvements in \_\_\_\_\_

WELDING METHOD

for which an application for Letters Patent of the United States of America has been executed by the undersigned  
(except in the case of a provisional application).

Insert Date  
of Signing of  
Application

on July 16, 2004; and

Insert Name  
of Assignee

WHEREAS, MITSUBISHI HEAVY INDUSTRIES, LTD.

Insert Address  
of Assignee

of 16-5, Konan 2-chome, Minato-ku, Tokyo 108-8215 Japan

its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of  
acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that  
may be granted therefor in the United States of America and

CHECK BOX  
IF APPROPRIATE

☐ in any and all foreign countries.

NOW, THEREFORE, in consideration of the sum of Ten Dollars (\$10.00) to the undersigned in hand  
paid, the receipt of which is hereby acknowledged, and other good and valuable consideration, the undersigned  
has (have) sold, assigned and transferred, and by these presents does sell, assign and transfer unto said  
Assignee the full and exclusive right to the said invention in the United States of America, its territories,  
dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s)  
which may be granted therefor in the United States of America, its territories, dependencies and possessions,  
and if the box above is designated, in any and all foreign countries;

and to any and all divisions, reissues, continuations, conversions and extensions thereof for the full term or  
terms for which the same may be granted.

204-10579  
7/24/04

ATTORNEY DOCKET NO. 2611-0223PUS1

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letter Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agree(s) to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States of America patent(s) or a grant of a valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorize(s) and request(s) the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patents resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) the full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the law firm of Birch, Stewart, Kolasch & Birch, LLP 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 U.S. Patent and Trademark Office for recordation of this document.

The undersigned hereby covenant(s) that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date	<u>July 16, 2004</u>	Name of Inventor	<u>Sachio Shimohata</u> (signature) Sachio SHIMOHATA
Date	<u>July 16, 2004</u>	Name of Inventor	<u>Masahiko MEGA</u> (signature) Masahiko MEGA
Date	<u>July 16, 2004</u>	Name of Inventor	<u>Kimihiro Kishi</u> (signature) Kimihiro KISHI
Date	_____	Name of Inventor	_____ (signature) Seiji KATAYAMA
Date	_____	Name of Inventor	_____ (signature)
Date	_____	Name of Inventor	_____ (signature)

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letter Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agree(s) to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States of America patent(s) or a grant of a valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorize(s) and request(s) the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patents resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) the full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the law firm of Birch, Stewart, Kolasch & Birch, LLP 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 U.S. Patent and Trademark Office for recordation of this document.

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In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date _____,	Name of Inventor _____ (signature) Sachio SHIMOHATA
Date _____,	Name of Inventor _____ (signature) Masahiko MEGA
Date _____,	Name of Inventor _____ (signature) Kimihiro KISHI
Date July 16, 2004,	Name of Inventor <u>Seiji Katayama</u> (signature) Seiji KATAYAMA
Date _____,	Name of Inventor _____ (signature)
Date _____,	Name of Inventor _____ (signature)