| FORM PTO-1595 (modified) | 06-09-1998 | | SHEET | U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office |
|---|----------------------------------|---|---------------------------------------|--|
| To the Assistant Commissioner for Pat | | | | C -) ab |
| Name of conveying party(ies): | 100730916 | | | copy(les) thereof. receiving party(les): |
| 1. Name of conveying partyties). | - | | address of r | eceiving party(les). |
| Kazuharu HIROKAWA, Rintaro CHIKA | MI, and Asaharu | Name: | Mitsubishi Hea | avy Industries, Ltd. |
| MATSUO | IN 0 4 1998 | Street | | Marunouchi 2-chome la-ku, Tokyo, Japan |
| Additional name(s) of conveying party(ies) attented | I? No | | | |
| 3. Nature of conveyance: | | | | |
| | erger nange of Name | dditional n | ame(s) & address(es | s) attached? <u>No</u> |
| 4. Application number(s) or patent number | er(s): | | | |
| If this document is being filed together with a | new application, the execution | on date of | the application is: <u>F</u> | ebruary 13, 1998 |
| A. Patent Application No.(s) | В | . Patent | No.(s) | |
| 09/027,191 | | | | |
| 07/02/,171 | | ached? N | o | |
| 5. Name and address of party to whom concerning document should be mailed | correspondence 6 | | - | ations and patents involved: 1 |
| Name: WENDEROTH, LIND & PONAC | CK, L.L.P. 7 | . Total f | ee (37 C.F.R. § | 3.41) \$ <u>40.00</u> |
| Internal Address: <u>Attn: Mr. Nils E. Pedersen</u> | | X En | closed [Check i | No. 281094 1 |
| Street Address: 2033 K Street, N.W., Suite 800 | | Authorized to be charged to deposit account 8. Deposit account number: 23-0975 | | |
| City: Washington, D.C. ZIP: 20006 | | | is page if paying by deposit account) | |
| | DO NOT USE THIS | SPACE | | |
| 9. Statement and signature. To the best of my knowledge and belief, the original document. **To the best of my knowledge and belief, the original document.** **To the best of my knowledge and belief, the original document.** **To the best of my knowledge and belief, the original document.** **To the best of my knowledge and belief, the original document.** **To the best of my knowledge and belief, the original document.** **To the best of my knowledge and belief, the original document.** **To the best of my knowledge and belief, the original document.** **To the best of my knowledge and belief, the original document.** **To the original document.** **To the best of my knowledge and belief, the original document.** **To th | the foregoing information | is tyng ai | nd correct and an | y attached copy is a true copy of |
| Nils E. Pedersen, Reg. No. 33,145 | Mill | CAL. | Win _ | June 4, 1998 |
| Name of Person Signing | Signature Total number of pages | - 5 | Dat | |

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PATENT
BEL: 9213 FRAME: 0365

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AMM5-4300 /2

ASSIGNMENT

| | In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned | | | | |
|----------------------------------|--|--|--|--|--|
| | Kazuharu HIROKAWA, | | | | |
| Insert Name(s) of Inventor(s) | Rintaro CHIKAMI and | | | | |
| | T omoharu MATSUO | | | | |
| | Apaharii | | | | |
| | the undersigned hereby sell(s) and assign(s) to | | | | |
| Insert Name(s) of Assignee(s) | Mitsubishi Heavy Industries, Ltd. | | | | |
| Address | of 5-1, Marunouchi 2-chome, Chiyoda-ku, Tokyo, Japan | | | | |
| | (hereinafter designated as the Assignee) the entire right, title and interest for the United States of America as defined in 35 USC 100, in the invention known as | | | | |
| Fitle of Invention | COOLING MEDIUM PATH IN GAS TURBINE MOVING BLADE | | | | |
| Date of Signing | for which an application for patent in the United States of America has been executed by the undersigned | | | | |
| | on February 13, 1998 The undersigned agree(s) to execute all papers necessary in connection with this application and any | | | | |

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional 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 or reissue thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

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

The undersigned agree(s) to perform all affirmative acts which amy be necessary to obtain a grant of a valid United States patent to the Assignee.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) 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 firm of WENDEROTH, LIND & PONACK, L.L.P., 2033 K Street, N.W., Suite 800, Washington, DC 20006, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the Rule of the United States Patent Office for recordation of this document.

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

| Date February 13, 1998 | _, Name of Inventor | Kozukaru Virokova | |
|---|---|---|---|
| Date February 13, 1998 | , Name of Inventor | Kazuharu Hirokawa | Kantaro Chilenni |
| Date February 13, 1998 | , Name of Inventor | | Rintaro Chikami |
| Date | , Name of Inventor | T omoharu Matsuo A Saharu | |
| Date | , Name of Inventor | | |
| Date | , Name of Inventor | | |
| Inventor(s) should be witnessed by Witness | | s who sign here.) | nsul. If not, then the execution by the |
| | ACKNO | WLEDGEMENT | |
| | } ss | · | |
| This | day of | | , 19, before me |
| personally came the above-named _ | | | |
| to me personally known as the indivi- executed the same of his (their) own | | | o did acknowledge to me that he (they) |
| SEAL | | Official Signatu | re |
| | *************************************** | Official Title | |
| The above application may | be more particularly | identified as follows: | |
| U.S. Application Serial No. | | Filing Date | |
| Applicant Reference Number | Atty Doo | cket No. | |
| Title of Invention | | | |

W/2005 4200 /2

ASSIGNMENT

| | In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned | | | | |
|----------------------------------|--|--|--|--|--|
| | Kazuharu HIROKAWA, | | | | |
| Insert Name(s) of Inventor(s) | Rintaro CHIKAMI and | | | | |
| | Tomoharu MATSUO xandx | | | | |
| | the undersigned hereby sell(s) and assign(s) to | | | | |
| Insert Name(s) of Assignee(s) | Mitsubishi Heavy Industries, Ltd. | | | | |
| Address | of 5-1, Marunouchi 2-chome, Chiyoda-ku, Tokyo, Japan | | | | |
| | (hereinafter designated as the Assignee) the entire right, title and interest for the United States of America as defined in 35 USC 100, in the invention known as | | | | |
| Title of Invention | COOLING MEDIUM PATH IN GAS TURBINE MOVING BLADE | | | | |
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| of Application | on February 13, 1998 | | | | |
| | The state of the s | | | | |

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional 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 or reissue thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

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

The undersigned agree(s) to perform all affirmative acts which amy be necessary to obtain a grant of a valid United States patent to the Assignee.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) 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.

4781 721

The undersigned hereby grant(s) the firm of WENDEROTH, LIND & PONACK, Southern Building, Suite 700, 805 Fifteenth Street, N.W., Washington, D.C. 20005, 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 Office for recordation of this document.

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

| Date | February 13, 1998 | _, Name of Inventor | haru Virokana | |
|-------|---------------------------------------|---|--------------------|-------------------------------------|
| Date | February 13, 1998 | Kazı _, Name of Inventor | haru Hirokawa | Rantaro Chileami |
| Date | February 13, 1998 | _, Name of Inventor | Raru Matsur | Rintaro Chikami |
| Date | | Tomo | haru Matsuo | |
| | | _, Name of Inventor | | |
| | | _, Name of Inventor | | |
| Inven | tor(s) should be witnessed by Witness | at least two witnesses who sig | n here.) be | . If not, then the execution by the |
| | | J | | |
| | | day of | | |
| perso | nally came the above-named _ | | | |
| | | vidual(s) who executed the foregrant free will for the purposes the | | d acknowledge to me that he (they) |
| SEAL | | _ | Official Signature | |
| | | | Official Title | |
| | The above application may | be more particularly identified | l as follows: | |
| U.S. | Application Serial No | | Filing Date | |
| Appli | cant Reference Number | Atty Docket No. | | |
| Title | of Invention | | | |
| | | | PAT | ENT |

REEL: 9213 FRAME: 0369

document. A corrected cover sheet and the originally recorded document accompany this request. Also enclosed is the fee set forth in 37 C.F.R. 3.41.

Respectfully submitted,

Kazuharu HIROKAWA et al.

Ву

Nils E. Pedersen

Registration No. 33,145 Attorney for Applicants

NEP/knw WENDEROTH, LIND & PONACK, L.L.P. Washington, D.C. Telephone (202) 721-8200 June 4, 1998