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9.30.03

Attorney Docket No. 117377

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|                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. A. Name of conveying parties:<br/>1) Ryuji KAI<br/>2) Toshio YAMADA</p> <p>B. Additional name(s) of conveying party(ies) attached?<br/><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>                                                                                                                                   | <p>2. A. Name and address of receiving party:<br/>NGK INSULATORS, LTD.<br/>2-56, SUDA-CHO, MIZUHO-KU,<br/>NAGOYA-CITY, AICHI-PREFECTURE,<br/>467-8530 JAPAN</p> |
| <p>3. A. Nature of conveyance:<br/><br/> <input checked="" type="checkbox"/> Assignment                      <input type="checkbox"/> Merger<br/> <input type="checkbox"/> Security Agreement           <input type="checkbox"/> Change of Name<br/> <input type="checkbox"/> Other _____</p> <p>B. Execution Date: <u>All) September 19, 2003</u></p> | <p>B. Additional name(s) &amp; address(es) attached?<br/><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>                                |

03916 U.S. PTO  
10/673497

09/30/03

4. A. If this document is being filed together with a new application, the execution date of the application is: All) September 19, 2003

B. Patent Application No.(s) 10673497

C. Patent No.(s) \_\_\_\_\_

Additional numbers attached? ☐ Yes ☒ No

|                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>5. Name and address of party to whom correspondence concerning document should be mailed:</p> <p>Name: <u>James A. Oliff</u></p> <p>Address: <b>OLIFF &amp; BERRIDGE, PLC</b><br/>P.O. Box 19928<br/>Alexandria, VA 22320</p> | <p>6. Total number of applications and patents involved: <u>1</u></p> <p>7. A. Total fee (37 CFR 3.41).....\$ <u>40.00</u></p> <p>B. Enclosed (Check No. <u>146963</u>)</p> <p>8. Credit any overpayment or charge any underpayment to deposit account number 15-0461.</p> |
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9. Statement and signature.  
*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

James A. Oliff Registration No. 27,975  
Joel S. Armstrong Registration No. 36,430

Date: September 30, 2003

Total number of pages including cover sheet, attachments, and document: 2

PATENT  
REEL: 014574 FRAME: 0576

# ASSIGNMENT

(1-8) Insert Name(s) of Inventor(s)

(1) Ryuji KAI (5) \_\_\_\_\_  
 (2) Toshio YAMADA (6) \_\_\_\_\_  
 (3) \_\_\_\_\_ (7) \_\_\_\_\_  
 (4) \_\_\_\_\_ (8) \_\_\_\_\_

In consideration of the sum of one dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned, each undersigned agrees to assign, and hereby does assign, transfer and set over to

(9) Insert Name of Assignee  
 (10) Insert Address of Assignee

(9) NGK Insulators, Ltd.  
 (10) 2-56, Suda-cho, Mizuho-ku, Nagoya-city, Aichi-prefecture, 467-8530 Japan

(hereinafter designated as the Assignee) and Assignee's heirs, successors, assigns and legal representatives, the entire right, title and interest for the United States of America as defined in 35 U.S.C. §100, in the invention, and in all applications for patent including any and all provisional, non-provisional, divisional, continuation, substitute, and reissue application(s), and all Letters Patent, extensions, reissues and reexamination certificates that may be granted on the invention known as

(11) Insert Identification such as Title, Case Number, or Foreign Application Number

(11) HONEYCOMB STRUCTURE, METHOD FOR MANUFACTURING HONEYCOMB STRUCTURE, AND EXHAUST GAS PURIFICATION SYSTEM USING HONEYCOMB STRUCTURE

(Attorney Docket No. 117377)

for which the undersigned has (have) executed an application for patent in the United States of America on even date herewith or

(12) Insert Date of Signing of Application

(12) on September 19, 2003

(13) Alternative Identification for filed applications

(13) U.S. application Serial Number \_\_\_\_\_  
 filed September 30, 2003

1) Each undersigned agrees to execute all papers necessary in connection with any application and any continuing, divisional or reissue applications for the invention, and any patent(s) issuing thereon, and also to execute separate assignments in connection with such applications and patents as the Assignee may deem necessary.

2) Each undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning any application or continuation or division thereof, or any patent or reissue application based thereon, for the invention, and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

3) Each undersigned agrees 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.

4) Each undersigned agrees to perform all affirmative acts which may be necessary to obtain, maintain or confirm by reissue or reexamination a grant of a valid United States patent to the Assignee.

5) Each undersigned authorizes and requests the Director of Patents to issue any and all Letters Patents of the United States resulting from said application(s) to the said Assignee, as Assignee of the entire interest, and covenants that he has full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreements in conflict herewith, and agrees that this assignment is binding on him and his heirs, successors, assigns and legal representatives.

6) Each undersigned hereby grants the firm of OLIFF & BERRIDGE, PLC the power to insert on this assignment any further identification that 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.

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

|      |                           |                    |                      |        |
|------|---------------------------|--------------------|----------------------|--------|
| Date | <u>September 19, 2003</u> | Inventor Signature | <u>Ryuji Kai</u>     | (SEAL) |
| Date | <u>September 19, 2003</u> | Inventor Signature | <u>Toshio Yamada</u> | (SEAL) |
| Date | _____                     | Inventor Signature | _____                | (SEAL) |
| Date | _____                     | Inventor Signature | _____                | (SEAL) |
| Date | _____                     | Inventor Signature | _____                | (SEAL) |
| Date | _____                     | Inventor Signature | _____                | (SEAL) |
| Date | _____                     | Inventor Signature | _____                | (SEAL) |
| Date | _____                     | Inventor Signature | _____                | (SEAL) |

This assignment should preferably be signed before: (a) a Notary Public if within the U.S.A. (b) a U.S. Consul if outside the U.S.A. If neither, then it should be signed before at least two witnesses who also sign here:

|      |       |         |       |
|------|-------|---------|-------|
| Date | _____ | Witness | _____ |
| Date | _____ | Witness | _____ |