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To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies): Hideyo Osanai, Susumu Ibaraki, Ken Iyoda and Makoto Namioka 12-29-03 Additional name(s) of conveying party(ies) attached? Yes No

2. Name and address of receiving party(ies) Name: Dowa Mining Co., Ltd. Internal Address: 8-2, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8282, Japan Street Address: City: State: Zip: Additional name(s) & address(es) attached? Yes No

3. Nature of conveyance: [X] Assignment [] Merger [] Security Agreement [] Change of Name [] Other Execution Date: December 19, 2003 and December 22, 2003

4. Application number(s) or patent number(s): 10747837 12/19/2003 12/22/2003 If this document is being filed together with a new application, the execution date of the application is: A. Patent Application No.(s) B. Patent No.(s) Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed: Name: Gregory P. LaPointe Internal Address: BACHMAN & LaPOINTE, P.C. DATESSEM1 00000038 10747837 40.00 DP Street Address: 900 Chapel Street, Suite 1201 City: New Haven State: CT Zip: 06510

6. Total number of applications and patents involved: 1 7. Total fee (37 CFR 3.41).....\$ 40.00 [X] Enclosed [] Authorized to be charged to deposit account 8. Deposit account number: 02-0184

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9. Signature. Gregory P. LaPointe December 29, 2003 Name of Person Signing Signature Date

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

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

PATENT REEL: 014855 FRAME: 0706

Assignment

In consideration of One Dollar (\$1.00) , and other good and valuable consideration, the receipt of which is hereby acknowledged, We, the undersigned,

Hideyo Osanai, Susumu Ibaraki, Ken Iyoda,
Makoto Namioka,

Hereby sell, assign and transfer to

a corporation of DOWA MINING CO., LTD.
having a place of business at 8-2, Marunouchi 1-Chome, Chiyoda-ku, Tokyo 100-8282 Japan,
its successors, assigns and legal representatives, the entire right, title and interest for the United States and all foreign countries, in and to any and all improvements which are disclosed in the application for United States Letters Patent, which has been executed by the undersigned concurrently herewith and is entitled

METAL / CERAMIC BONDING SUBSTRATE AND METHOD FOR PRODUCING SAME
Attorney's Docket No.: 03-745 , and in and to said application and all divisional, continuing, substitute, renewal, reissue, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of said improvements; and in and to all original and reissued patents which have been or shall be issued in the United States and all foreign countries on said improvements;

Agree that said Assignee may apply for and receive Letters Patent for said improvements in its own name; and that, when requested, without charge to but at the expense of said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all said improvements; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns, and representatives, all facts known to the undersigned relating to said improvements and the history thereof and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing and maintaining proper patent protection for said improvements and for vesting title to said improvements and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns and legal representatives; and

Convent with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Date	<u>Dec 19, 2003</u>	<u>Hideyo Osanai</u>	(L.S.)
Date	<u>Dec 22, 2003</u>	<u>Susumu Ibaraki</u>	(L.S.)
Date	<u>Dec 19, 2003</u>	<u>Ken Iyoda</u>	(L.S.)
Date	<u>Dec 19, 2003</u>	<u>Makoto Namioka</u>	(L.S.)