Electronic Version v1.1

Stylesheet Version v1.1

| SUBMISSION TYPE: | | NEW ASSIGNMENT | | |
|--|---|---|----------------|--|
| NATURE OF CONVEYANCE: | | ASSIGNMENT | ASSIGNMENT | |
| CONVEYING PARTY | Y DATA | | | |
| Name | | | Execution Date | |
| Brian E Joseph | | | 05/12/2005 | |
| Douglas J Merriman | | | 05/12/2005 | |
| Robert Nolte | | | 05/11/2005 | |
| Matthew M Rowe | | | 05/11/2005 | |
| RECEIVING PARTY | DATA | | | |
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| Internal Address: | The Millennium Centre | | | |
| City: | Triadelphia | | | |
| State/Country: | | | | |
| Postal Code: | 26059 | | | |
| PROPERTY NUMBERS Total: 1 Property Type | | Number | | |
| Application Number | : 1 | 11000521 | | |
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500036382

PATENT REEL: 016167 FRAME: 0851

PATENT REEL: 016167 FRAME: 0852

ASSIGNMENT

Whereas, Assignors have invented certain new and useful processes, machines, articles of manufacture, compositions of matter, and/or improvements thereof ("Invention") described in U.S. Patent Application No. 11/000,521 entitled

METAL MATRIX COMPOSITE STRUCTURES

hereinafter ("Application").

Whereas, Assignors desire to convey all rights, title and interests in and to the Invention and Application, to Touchstone Research Laboratory, Ltd. ("Assignee"), with offices located at R.D. 1, Box 100-B, The Millennium Centre, Triadelphia, West Virginia 26059

Now, for valuable consideration by Assignee to Assignors, the receipt of which is hereby acknowledged, and for other good and valuable consideration, Assignors hereby convey, assign, sell and transfer to Assignee all rights, title and interests in and to the Invention and Application, including any divisions, continuations, and continuations-in-part thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted or have granted for said Invention, and in and to any and all reissues and reexaminations thereof, and in and to any and all priority rights, Convention rights, and other benefits accruing or to accrue with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto.

Assignors hereby authorize and request the Director of the United States Patent and Trademark Office to issue any United States Letters Patent which may issue for the Invention to Assignee.

Assignors hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this Assignment.

Assignors further covenant that Assignee will, upon Assignee's request, be provided promptly with all pertinent facts and documents relating to the Inventions, Patents, Patent Applications, and any patents granted thereon, as may be known and accessible to Assignors, and Assignors will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to Assignee or Assignee's legal representative any and all papers, instruments or affidavits required to apply for, protect, obtain, maintain, issue, defend and enforce the Application, Patent, Invention, whether in the U..S. or any and all foreign countries and any patents granted thereon and/or for obtaining any reissue or reissues of any patent which may be granted for the invention and perform such further acts which may be necessary or desirable to carry out the intent of this agreement as the Assignee thereof shall hereafter require and prepare at assignee's expense.

> PATENT REEL: 016167 FRAME: 0853

Page 1 of 2

IN WITNESS WHEREOF. Assignor has hereunto set hand and seal.

Assignors:

| Name: | Brian E. JOSEPH | | | |
|------------|--|--|--|--|
| Signature: | Brian E Joseph Date May 12,2005 | | | |
| Residence: | 18 Lynwood Avenue, Wheeling, West Virginia 26003 | | | |
| •••• | | | | |
| Name: | Douglas J. MERRIMAN | | | |
| Signature: | (1) & Jes Man Date 5/12/05 | | | |
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| Residence: | 17 Oglebay Park Estates, Wheeling, West Virginia 26003 | | | |
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| Name: | Robert NOLTE | | | |
| Signature: | Roba Jillt Date 5/11/05 | | | |
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| Residence. | | | | |
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| Name: | Matthew M. ROWE | | | |
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