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Post Office Box 7068 Pasadena, CA 91109-7068

PATENT REEL: 014082 FRAME: 0837

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

1. Name of conveying party(ies): Madapusi K. Keshavan; Anthony Griffo; David Truax; and Dah-Ben Liang Additional name(s) of conveying party(ies) attached: No 3. Name of conveyance: X Assignment ☐ Merger ☐ Change of Name ☐ Other: Execution Date: May 1, 2003; May 1, 2003; April 28, 2003; and April 28, 2003	2. Name and address of receiving party(ies): Name: SMITH INTERNATIONAL, INC. Street Address: 16740 Hardy Street, Houston, Texas 77032 Additional name(s) & address(es) attached? No	
4. Application number(s) or patent number(s): If this document is being filed together with a new applis: May 1, 2003; May 1, 2003; April 28, 2003 and A A. Patent Application No.(s)	lication, the execution date of the application April 29, 2003. B. Patent No.(s)	
5. Please return the recorded document and address all correspondence to: CHRISTIE, PARKER & HALE, LLP P.O. Box 7068 Pasadena, CA 91109-7068 Attention: Constantine Marantidis 10. Explanatory letter is enclosed.	 6. Total number of applications and patents involved 1 7. Total fee enclosed (37 CFR 3.41): \$40.00 8. Any deficiency or overpayment of fees should be charged or credited to Deposit Account No. 03-1728, except for payment of issue fees required under 37 CFR § 1.18. Please show our docket number with any credit or charge to our Deposit Account. 	
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. Date: May 14, 2003 By Name: Constantine Marantidis 626/795-9900 Express Mail No. EV35337446VS		
72003 ECREPER 00000009 10437750 2:8021 40.00 E	Total number of pages including cover sheet, attachments, and document:	

ASSIGNMENT

WHEREAS, WE, MADAPUSI K. KESHAVAN; ANTHONY GRIFFO; DAVID TRUAX; AND DAH-BEN LIANG, residing at 19 Betony Place, The Woodlands, Texas 77382; 70 North Acacia Park Circle, The Woodlands, Texas 77382; 9307 Point Park Drive, Texas 77095; and Dah-Ben Liang, 27 Rustic View Court, The Woodlands, Texas 77381, respectively, have invented certain new and useful improvements disclosed in an application for United States Letters Patent entitled COARSE CARBIDE SUBSTRATE CUTTING ELEMENTS AND METHOD OF FORMING THE SAME, executed by us on even date herewith, together with claim to the priority of United States Provisional Application No. 60/398,374, filed July 24, 2002;

AND WHEREAS SMITH INTERNATIONAL, INC., a Delaware Corporation, having a place of business at 16740 Hardy Street, Houston, Texas 77032 (hereafter, together with any successors, legal representatives or assigns thereof, called "ASSIGNEE") wants to acquire the entire right, title and interest in and to said improvements and application.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to us in hand paid. and other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned, transferred and set over, and do hereby sell, assign, transfer and set over to ASSIGNEE the entire right, title and interest in and to said improvements, and said application and all divisions and continuations thereof, and all United States Letters Patents which may be granted thereon and all reissues, reexaminations and extensions thereof, and all priority rights under all available International Agreements, Treaties and Conventions for the protection of intellectual property in its various forms in every participating country, and all applications for patents (including related rights such as utility-model registrations. inventor's certificates, and the like) heretofore or hereafter filed for said improvements in any foreign countries, and all patents (including all continuations, divisions, extensions, renewals, substitutes, and reissues thereof) granted for said improvements in any foreign countries; and we hereby authorize and request the United States Commissioner of Patents and Trademarks, and any officials of foreign countries whose duty it is to issue patents on applications as aforesaid, to issue all patents for said improvements to ASSIGNEE in accordance with the terms of this Assignment;

AND WE HEREBY covenant that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith;

AND WE HEREBY further covenant and agree that we will communicate to ASSIGNEE any facts known to us respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute and reissue applications, make all rightful oaths and generally do everything possible to aid ASSIGNEE to obtain and enforce proper patent protection for said improvements in all countries.

Page 1 of 3

PATENT REEL: 014082 FRAME: 0838

IN TESTIMONY WHEREOF, I hereunto set my	y hand this $\int_{-\infty}^{\infty} day$ of May , 2003.
of satisfactory evidence) to be the person whose acknowledged to me that he executed the same in	Madapusi K. Keshavan Mez G. Schifan, Notary Public, ersonally known to me (or proved to me on the basis ename is subscribed to the within instrument and his authorized capacity, and that by his signature on lift of which the person acted, executed the instrument.
INEZ G. SCHIFARE MY COMMISSION LYPERO June 8, 2004	WITNESS my hand and official seal. Signature of Notary
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IN TESTIMONY WHEREOF, I hereunto set my	y hand this Aday of May, 20 03. Anthony Griffo
STATE OF $\sqrt{2}$ $\sqrt{2}$ $\sqrt{3}$ $\sqrt{3}$	
satisfactory evidence) to be the person whose acknowledged to me that he executed the same in	nez6. Schfan, Notary Public, lly known to me (or proved to me on the basis of name is subscribed to the within instrument and his authorized capacity, and that by his signature on alf of which the person acted, executed the instrument.
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Page 2 of 3

IN TESTIMONY WHEREOF, I hereunto set my hand th	is 28 day of $April$, 20 03.
STATE OF 10kas (County of Harris)	vid Truax 2 Schifani, Notary Public,
On	e (or proved to me on the basis of satisfactory within instrument and acknowledged to me that by his signature on the instrument the
INEZ G. SCHIFANI MY COMMISSION EXPIRES June 8, 2004 ************	TNESS my hand and official seal. A Salphur nature of Notary
	his 28 day of April , 20 03.
STATE OF TEXAS) COUNTY OF HOVIS) On	subscribed to the within instrument and prized capacity, and that by his signature on
INEX G. SCHIFANI RY COMMISSION EXPIRES JURO B. 2004 Sig	TNESS my hand and official seal. Shape of Notary
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Page 3 of 3

RECORDED: 05/14/2003