505136084 10/11/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5182847

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DAVID DENBOER	11/07/2016
CLINT HAMILTON	11/10/2016
MICHAEL DAVID FRANCE	01/04/2018
RYAN DAVIS	12/20/2017
LYNN BELNAP	12/20/2017
YI FANG	12/20/2017

RECEIVING PARTY DATA

Name:	SMITH INTERNATIONAL, INC.
Street Address:	1310 RANKIN ROAD
City:	HOUSTON
State/Country:	TEXAS
Postal Code:	77073

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15556645

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Email:kdumas-scarber@slb.comCorrespondent Name:KRISTINE DUMAS-SCARBERAddress Line 1:10001 RICHMOND AVENUE

Address Line 2: ROOM 4720

Address Line 4: HOUSTON, TEXAS 77042

ATTORNEY DOCKET NUMBER:	IS14.9315-US-PCT
NAME OF SUBMITTER:	KRISTINE DUMAS-SCARBER
SIGNATURE:	/KRISTINE DUMAS-SCARBER/
DATE SIGNED:	10/11/2018

Total Attachments: 12

PATENT REEL: 047128 FRAME: 0196

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source=IS149315USPCT_20181011_Signed_Assignment_Original Inventorship#page1.tif source=IS149315USPCT_20181011_Signed_Assignment_Original Inventorship#page2.tif source=IS149315USPCT_20181011_Signed_Assignment_Original Inventorship#page3.tif source=IS149315USPCT_20181011_Signed_Assignment_Original Inventorship#page4.tif source=IS149315USPCT_20181011_Signed_Assignment_Original Inventorship#page5.tif source=IS149315USPCT_20181011_Signed_Assignment_Additional Inventors#page1.tif source=IS149315USPCT_20181011_Signed_Assignment_Additional Inventors#page2.tif source=IS149315USPCT_20181011_Signed_Assignment_Additional Inventors#page3.tif source=IS149315USPCT_20181011_Signed_Assignment_Additional Inventors#page4.tif source=IS149315USPCT_20181011_Signed_Assignment_Additional Inventors#page5.tif source=IS149315USPCT_20181011_Signed_Assignment_Additional Inventors#page6.tif source=IS149315USPCT_20181011_Signed_Assignment_Additional Inventors#page6.tif source=IS149315USPCT_20181011_Signed_Assignment_Additional Inventors#page7.tif

Assignment

WHEREAS, the undersigned inventors hereinafter referred to as the "Inventors," each said Inventor being listed below:

David DenBoer, a citizen of the United States of America; and

Clint Hamilton, a citizen of the United States of America;

Has/have invented certain new and useful improvements in

ASSEMBLIES FOR MAKING SUPERHARD PRODUCTS BY HIGH PRESSURE/HIGH TEMPERATURE PROCESSING

as described and set forth in an application identified as International/European Procedure Application No. PCT/US2016/021520, (Docket No. IS14.9315-WO-PCT) filed March 9, 2016. This assignment is effective as of March 9, 2016.

AND WHEREAS, the "COMPANIES", listed in Schedule A, are desirous of acquiring or confirming their acquisition of the entire right, title and interest in and to said invention, inventions or improvements, and in and to said application, and in and to any and all patents, both of the United States and of all foreign countries, that may be obtained therefore as outlined in Schedule A;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, BE IT KNOWN, that the undersigned Inventors, for good and valuable considerations, the receipt and sufficiency of which hereby acknowledge, have sold, assigned, transferred and conveyed, and by this assignment do sell, assign, transfer and convey, unto said COMPANIES, their successors and assigns, the entire right, title and interest throughout the world, in and to the above-described invention, inventions or improvements described or set forth in said application, in any form or embodiment thereof, and in and to said application, and in and to any applications filed in any foreign country based thereon, including the right to file foreign applications under the provisions of any convention or treaty; and in and to any confirmation, divisional, continuation, continuation-in-part, or substitute application which may be filed on said invention, inventions or improvements in the United States or in any foreign country; and in and to any and all patents, certificates, utility models, reissues, extensions, additions or confirmations thereof which may be granted in the United States or in any foreign country upon said invention, inventions or improvements,

TO HAVE AND TO HOLD the same to the full end of the term or terms for which any and all such United States and foreign patents and grants may be issued on said invention, inventions or improvements.

AND said Inventors do hereby authorize and request the issuing authority to issue any and all of said United States and foreign patents on said application or applications to said COMPANIES,

their successors and assigns, as the assignee of the entire right, title and interest in and to the same, for the sole use and benefit of said COMPANIES, their successors and assigns.

AND said Inventors do hereby covenant and warrant that said Inventors have full right to convey the entire right, title and interest herein assigned free and clear of all licenses, encumbrances and liens whatsoever, and that no said Inventors has executed and will execute any instruments in conflict herewith.

AND said Inventors, for the conditions aforesaid, do hereby covenant and agree to and with the said COMPANIES, their successors and assigns, that each Inventor, his or her executors, administrators, or other personal representatives, shall and will do all lawful acts and things, make all rightful oaths, and make, execute and deliver any and all other instruments in writing, and any and all further applications, papers, powers, affidavits, assignments, disclaimers and other documents, which in the opinion of counsel for said COMPANIES, their successors and assigns, may be required or necessary in this or in any foreign country more effectually to secure to and vest in said COMPANIES, their successors and assigns, the entire right, title and interest in and to said invention, inventions or improvements, application or applications, patents, rights, titles, benefits, privileges, and advantages hereby sold, assigned, confirmed, transferred and conveyed.

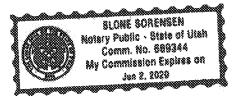
This Agreement is entered in contemplation of and shall be construed in accordance with the laws of the State of Texas, and may not be amended or modified unless in a subsequent writing executed by the COMPANIES.

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IN WITNESS WHEREOF I, David DenBoer, have, day of, 2016.	hereunto s	set my	hand a	ınd seal	this
	David D	uil e	<u> Jen</u>	<u> B</u>	<u> </u>
STATE OF UTAH					
COUNTY OF \\TO\\\					

BEFORE ME this _____ day of ______, 2016, personally appeared David DenBoer, to me known to be the person who is described in and who executed the foregoing assignment instrument and acknowledged to me that he/she executed the same of his/her own free will for the purpose therein expressed.

Seal



Notary Public

IN WITNESS WHEREOF I, Clint Hamilton, have 1 O day of Notwood , 2016.	hereunto set my hand and seal this
	Sint Asmilton
STATE OF UTAH	
COUNTY OF UTAH	
BEFORE ME this 10 th day of 1000 2016, to me known to be the person who is described in and we instrument and acknowledged to me that he/she executed the purpose therein expressed.	ho executed the foregoing assignment
Seal	Stollary Public
	SHARMAE W GILGEN Notary Public, State of Utah Commission & 686513 My Commission Expires May 13, 2017

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Schedule A "COMPANIES"

Smith International, Inc.

Corporation of: Delaware

Located at: 1310 Rankin Road, Houston, Texas 77073, U.S.A.

Assignee for applications in: All throughout the World

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Assignment

WHEREAS, the undersigned inventors hereinafter referred to as the "Inventors," each said Inventor being listed below:

Michael David France, a citizen of the United States of America:

Ryan Davis, a citizen of the United States of America:

Lynn Belnap, a citizen of the United States of America; and

Yi Fang, a citizen of China;

Has/have invented certain new and useful improvements in

ASSEMBLIES FOR MAKING SUPERHARD PRODUCTS BY HIGH PRESSURE/HIGH TEMPERATURE PROCESSING

as described and set forth in an application identified as International Application No. PCT/US2016/021520, (Docket No. IS14.9315-WO-PCT) filed March 9, 2016. This assignment is effective as of March 9, 2016.

AND WHEREAS, the "COMPANIES", listed in Schedule A, are desirous of acquiring or confirming their acquisition of the entire right, title and interest in and to said invention, inventions or improvements, and in and to said application, and in and to any and all patents, both of the United States and of all foreign countries, that may be obtained therefore as outlined in Schedule A;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, BE IT KNOWN, that the undersigned Inventors, for good and valuable considerations, the receipt and sufficiency of which hereby acknowledge, have sold, assigned, transferred and conveyed, and by this assignment do sell, assign, transfer and convey, unto said COMPANIES, their successors and assigns, the entire right, title and interest throughout the world, in and to the above-described invention, inventions or improvements described or set forth in said application, in any form or embodiment thereof, and in and to said application, and in and to any applications filed in any foreign country based thereon, including the right to file foreign applications under the provisions of any convention or treaty; and in and to any confirmation, divisional, continuation, continuation-in-part, or substitute application which may be filed on said invention, inventions or improvements in the United States or in any foreign country; and in and to any and all patents, certificates, utility models, reissues, extensions, additions or confirmations thereof which may be granted in the United States or in any foreign country upon said invention, inventions or improvements.

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TO HAVE AND TO HOLD the same to the full end of the term or terms for which any and all such United States and foreign patents and grants may be issued on said invention, inventions or improvements.

AND said Inventors do hereby authorize and request the issuing authority to issue any and all of said United States and foreign patents on said application or applications to said COMPANIES, their successors and assigns, as the assignee of the entire right, title and interest in and to the same, for the sole use and benefit of said COMPANIES, their successors and assigns.

AND said Inventors do hereby covenant and warrant that said Inventors have full right to convey the entire right, title and interest herein assigned free and clear of all licenses, encumbrances and liens whatsoever, and that no said Inventors has executed and will execute any instruments in conflict herewith.

AND said Inventors, for the conditions aforesaid, do hereby covenant and agree to and with the said COMPANIES, their successors and assigns, that each Inventor, his or her executors, administrators, or other personal representatives, shall and will do all lawful acts and things, make all rightful oaths, and make, execute and deliver any and all other instruments in writing, and any and all further applications, papers, powers, affidavits, assignments, disclaimers and other documents, which in the opinion of counsel for said COMPANIES, their successors and assigns, may be required or necessary in this or in any foreign country more effectually to secure to and vest in said COMPANIES, their successors and assigns, the entire right, title and interest in and to said invention, inventions or improvements, application or applications, patents, rights, titles, benefits, privileges, and advantages hereby sold, assigned, confirmed, transferred and conveyed.

This Agreement is entered in contemplation of and shall be construed in accordance with the laws of the State of Texas, and may not be amended or modified unless in a subsequent writing executed by the **COMPANIES**.

IN WITNESS WHEREOF I, Michael D 4 day of, 20	Pavid France, have hereunto set my hand and seal this
	Michael David France
STATE OF UTAH	
COUNTY OF UTAH	
France , to me known to be the person	MAAN. 2018, personally appeared Michael David who is described in and who executed the foregoing d to me that he/she executed the same of his/her own l.
Seal MANDY Notary State o Comm. No	Public Utah Notary Public Notary Public

IN WITNESS WHEREOF I, Ryan Davis, 12017.	have hereunto set my hand and seal this 10 day of
	Ryan Davis
STATE OF UTAH	
COUNTY OF UTAH	
known to be the person who is describ	, 2017, personally appeared Ryan Davis , to me bed in and who executed the foregoing assignment he/she executed the same of his/her own free will for
Seal	Notary Public
SHARMAE W GILGEN Notery Public, State of Utah Commission # 695282 My Commission Expires On May 13, 2021	

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	I, Lynn Belnap, have hereunto set my hand and seal this <u>ho</u> day, 2017.
	Lynn Belnap
STATE OF UTAH	
COUNTY OF UTAH	
me known to be the person	day of Mun, 2017, personally appeared Lynn Belnap, to n who is described in and who executed the foregoing assignment ed to me that he/she executed the same of his/her own free will for ed.
Seal	Notary Public .
Notary Public Commissi My Commiss	W GILGEN ; State of Utah on #695282 ion Expires On 3, 2021

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IN WITNESS WHEREOF I, Yi Fang , hav	e hereunto set my hand and seal this <u>Mo</u> day of Yi Fang
STATE OF UTAH	
COUNTY OF UTAH	
known to be the person who is described	Who, 2017, personally appeared Yi Fang , to me in and who executed the foregoing assignment/she executed the same of his/her own free will for
Seal	Notary Public
SHARMAE W GILGEN Notery Public, State of Utan Commission # 695282 My Commission Fxpires On May 13, 2021	

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Schedule A "COMPANIES"

Smith International, Inc.

Corporation of: Delaware

Located at: 1310 Rankin Road, Houston, Texas 77073, U.S.A.

Assignee for applications in: All throughout the World

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7 PATENT **REEL: 047128 FRAME: 0209 RECORDED: 10/11/2018**