PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2914573

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| KJELL HAUGVALSTAD | 06/12/2014 |
| YOUHE ZHANG | 06/14/2014 |

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: | 14358490 |

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: | 11-GD134-US-PCT |
|-------------------------|--------------------------|
| NAME OF SUBMITTER: | KRISTINE DUMAS-SCARBER |
| SIGNATURE: | /KRISTINE DUMAS-SCARBER/ |
| DATE SIGNED: | 06/26/2014 |

Total Attachments: 3

source=11GD134USPCT_20140626_Signed_Assignment#page1.tif source=11GD134USPCT_20140626_Signed_Assignment#page2.tif source=11GD134USPCT_20140626_Signed_Assignment#page3.tif

PATENT 502867976 REEL: 033182 FRAME: 0620

ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned individual(s) (referred to herein as the "INVENTOR(S)") hereby assign, transfer and set over to:

Smith International, Inc.

Having the following address:

1310 Rankin Rd. Houston, Texas 77073

(Referred to herein as "COMPANY"), its successors, and assigns, the entire right, title, and interest, worldwide, in and to the invention known by the following title:

ROLLING CUTTER WITH SIDE RETENTION

for which the undersigned is/are going to file or has/have filed an application for patent in the United States of America, together with said patent application, all divisions, continuations, continuations-in-part, reissues, re-examinations, and extensions thereof, and all United States Letters Patent and any legal equivalent thereof in a foreign country, including the right to claim priority, which may be granted therefor. Such interest represents the entire ownership of said applications and Letters Patent when granted and is to be owned by COMPANY, its successors, and assigns, or their legal representatives, for the full and entire term for which such Letters Patent may be granted or extended, as fully and entirely as the same would have been enjoyed by the INVENTOR(S) if this assignment had not been made.

In addition, the undersigned INVENTOR(S) each hereby agrees:

- To sign and execute any further documents which may be necessary or desirable, lawful, and proper in connection with the prosecution of all applications for patent(s) on the INVENTION in the United States Patent and any legal equivalent thereof in a foreign country, including without limitation said application and all divisions, continuations, continuations-in-part, amendments thereof, and all interference proceedings associated therewith, or otherwise necessary or desirable to secure the title thereto to COMPANY;
- To execute all papers and documents and to perform all lawful acts which may be necessary in connection with claims to priority or otherwise under the International Convention for the Protection of Industrial Property or similar treaties or agreements;
- To perform all lawful affirmative acts which may be necessary to obtain the grant of a valid and enforceable patent to COMPANY;

The undersigned INVENTOR(S) each hereby authorizes and requests the Commissioner of Patents and Trademarks in the United States to issue any and all Letters Patent resulting from said application, including without limitation any division, continuation, continuation-in-part, reissue or re-examination thereof to COMPANY.

The undersigned INVENTOR(S) each hereby grants to COMPANY the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for the recordation of this document.

Assignment - Worldwide Attorney Docket No. 11-GD134-US-PCT

Page 1

IN WITNESS WHEREOF, this Assignment has been executed by the undersigned individual on the date appearing by such individual's signature:

| 12/6-14 | Inventor Signature: |
|-----------------------------|---|
| Date | Print or Type Name: Kjell Haugvaldstad |
| Witness 1: Date: 2014-06-12 | Witness Signature: |
| | Print or Type Name: ARE TUNDERUS |
| | Address: OLE RELVAAGSU. 7B |
| | No-702\$ TRHETH |
| Witness 2: | |
| Date: 12.06.14 | Witness Signature: AMA DEMSAK |
| | Print or Type Name: <u>ANNE KARIN BLORNSUIK</u> |
| | Address: VANVIE VEIEN 7 |
| | FIRS VANVICAN |

When this Assignment is <u>not</u> filed concurrently with the patent application, the following identifying information may be added <u>after</u> execution:

U.S. Application Serial No.: 14/358,490 Filing Date: November 16, 2012

Assignment - Worldwide Attorney Docket No. 11-GD134-US-PCT

Page 2

IN WITNESS WHEREOF, this Assignment has been executed by the undersigned individual on the date appearing by such individual's signature:

10-14-14

Inventor Signature:

Print or Type Name:

Youhe Zhang

Votary Public

State of: TEXAS

County of: HARRIS

Before me personally appeared Youhe Zhang, who acknowledged the foregoing instrument to be a free act and deed and also represented that he/she is authorized to execute this Assignment.

Dated: 6-14-14

Notary Public My C



INEZ G. CAMERION MY COMMISSION EXPIRES June 6, 2017

When this Assignment is not filed concurrently with the patent application, the following identifying information may be added after execution:

U.S. Application Serial No.: 14/358,490 Filing Date: November 16, 2012

Assignment - Worldwide Attorney Docket No. 11-GD134-US-PCT

RECORDED: 06/26/2014

Page 3