502566870 11/13/2013

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2612681

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

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------------|----------------|
| WILLIAM JOSEPH TCHIR | 12/10/2012 |
| ERIC CHELUGET | 12/05/2012 |

RECEIVING PARTY DATA

| Name: | NOVA CHEMICALS (INTERNATIONAL) S.A. |
|-----------------|-------------------------------------|
| Street Address: | AVENUE DE LA GARE 14 |
| City: | FRIBOURG |
| State/Country: | SWITZERLAND |
| Postal Code: | 1700 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14078576 |

CORRESPONDENCE DATA

Fax Number: (412)490-4359 Phone: 412-490-4323

Email: Karen.Lockhart@novachem.com

Correspondence will be sent via US Mail when the email attempt is unsuccessful.

Correspondent Name: NOVA CHEMICALS INC./KAREN S. LOCKHART

Address Line 1: 1555 CORAOPOLIS HEIGHTS ROAD
Address Line 4: MOON TOWNSHIP, PENNSYLVANIA 15108

| ATTORNEY DOCKET NUMBER: | 2010 039 USA-NONP |
|-------------------------|--------------------|
| NAME OF SUBMITTER: | KAREN S. LOCKHART |
| Signature: | /karen s lockhart/ |
| Date: | 11/13/2013 |

PATENT

REEL: 031589 FRAME: 0296

Total Attachments: 4

source=2010039USAssignment#page1.tif source=2010039USAssignment#page2.tif source=2010039USAssignment#page3.tif source=2010039USAssignment#page4.tif

> PATENT REEL: 031589 FRAME: 0297

WORLD WIDE ASSIGNMENT

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

TCHIR, William Joseph, a Canadian citizen residing at 315 Citadel Hills Place N.W., Calgary, Alberta, CANADA, T3G 3X1; and

CHELUGET, Eric, a Canadian citizen residing at 201 N. Schoenbeck Road, Prospect Heights, Illinois, U.S.A., 60070,

do hereby sell, assign and transfer to **NOVA Chemicals (International) S.A.**, a corporation of Switzerland, having an office at Avenue de la Gare 14, 1700 Fribourg, Switzerland, its successors and assigns, all our right, title and interest in and to our invention entitled:

"REDUCTION OF FOULING IN HIGH PRESSURE REACTORS"

in Canada and in all other countries of the world.

We further undertake to execute without further consideration all lawful papers, all divisional, continuing and reissue applications, make all rightful oaths, and generally do everything possible to assist and enable the said NOVA Chemicals (International) S.A., its successors, assigns and nominees, to obtain and enforce proper patent protection for the said invention.

This indenture shall be binding upon and enure to the benefit of the heirs, executors, administrators, successors and assigns, respectively, of the parties hereto.

| SIGNED in the City of Calgary, in the Province of Alberta, this 10 day of 12 day of 12 day of 14 day of 15 |
|--|
| WITNESS: (e) learn Joseph Tolling William Joseph Tchir |
| AFFIDAVIT OF EXECUTION |
| I, <u>him Over and</u> , whose full post office address is c/o NOVA Chemicals Corporation, 2928 - 16 Street NE, Calgary, Alberta, Canada, T2E 7K7 |
| MAKE OATH AND SAY: |
| That I was personally present and did see William Joseph Tchir who is personally known to me to be the person named in this assignment duly sign and execute the same. |
| SWORN before me at the City) of Calgary, in the Province of Alberta, this 13 day of December, 2012 |

A Notary Public in and for the Province of Alberta

CAROLYN ANN HOFF My Appointment Expires December 31, 2014

H:\Trevor\TTAssign-unsigned\2010039WWJTassn.docx

| SIGNED in the City of | , in the State of | , this day of |
|--|---|-------------------------------|
| , 20 | | |
| WITNESS: | | |
| | Eric Che | eluget |
| | AFFIDAVIT OF EXECUTION | |
| l, | , whose full post office address | s is |
| MAKE OATH AND SAY: That I was personally present and | did see Eric Cheluget who is per | sonally known to me to be the |
| SWORN before me at the City of, in the State of, this day of, 20 | ignment duly signed and execute ())))) | ine same. |
| A Notary Public in and for the State of | | |

H:\Trevor\TTAssign-unsigned\2010039WWJTassn.docx

WORLD WIDE ASSIGNMENT

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

TCHIR, William Joseph, a Canadian citizen residing at 315 Citadel Hills Place N.W., Calgary, Alberta, CANADA, T3G 3X1; and

CHELUGET, Eric, a Canadian citizen residing at 201 N. Schoenbeck Road, Prospect Heights, Illinois, U.S.A., 60070,

do hereby sell, assign and transfer to **NOVA Chemicals (International) S.A.**, a corporation of Switzerland, having an office at Avenue de la Gare 14, 1700 Fribourg, Switzerland, its successors and assigns, all our right, title and interest in and to our invention entitled:

"REDUCTION OF FOULING IN HIGH PRESSURE REACTORS"

in Canada and in all other countries of the world.

We further undertake to execute without further consideration all lawful papers, all divisional, continuing and reissue applications, make all rightful oaths, and generally do everything possible to assist and enable the said NOVA Chemicals (International) S.A., its successors, assigns and nominees, to obtain and enforce proper patent protection for the said invention.

This indenture shall be binding upon and enure to the benefit of the heirs, executors, administrators, successors and assigns, respectively, of the parties hereto.

| | William Joseph Tchir |
|--|--|
| | AFFIDAVIT OF EXECUTION |
| I, Corporation, 2928 - 16 Street N | , whose full post office address is c/o NOVA Chemicals IE, Calgary, Alberta, Canada, T2E 7K7 |
| MAKE OATH AND SAY: | |
| That I was personally present a be the person named in this as | and did see William Joseph Tchir who is personally known to m signment duly sign and execute the same. |
| SWORN before me at the City) of Calgary, in the Province) of Alberta, this day of) | |

H.\Trevor\TTAssign-unsigned\2010039WWJTassn.docx

Province of Alberta

| SIGNED in the City of $\frac{\sqrt{2}}{\sqrt{2}}$, in the State of $\frac{\sqrt{1}}{\sqrt{1}}$, this $\frac{\sqrt{2}}{\sqrt{2}}$ day of |
|--|
| SIGNED in the City of <u>fes [141</u> , in the State of <u>L///no/></u> , this day of <u>L</u> c_, 20_1.2 |
| Sam Bold. Eric Cheluget |
| AFFIDAVIT OF EXECUTION |
| 1, Arlene J. Ohman, whose full post office address is 50 |
| F. Algonquin Rd, Ds Plains, 16 60017 |
| MAKE OATH AND SAY: |
| That I was personally present and did see Eric Cheluget who is personally known to me to be the person named in the attached assignment duly signed and execute the same. |
| SWORN before me at the City of DES PAWS in the State of ILLINGIS, this 5 th day of DECEMBER, 20/2, |
| Chlene J. Oliman State MARCH 26, 2013 |
| A Notary Public in and for the State of FLLINOIS |

H:\Trevor\TTAssign-unsigned\2010039WW.iTassn.docx

PATENT REEL: 031589 FRAME: 0301

RECORDED: 11/13/2013