

DOCUMENT CERTIFICATION

I, Dawn A. Brown, Senior Intellectual Property Paralegal for The Lubrizol Corporation and its affiliates, which includes Lubrizol Oilfield Solutions, Inc., hereby certifies that the attached is a true and exact copy of the Patent Assignment between Rajesh K. Saini, Clayton S. Smith, Mathew M. Samuel, Kern L. Smith, Chih-Chau Hwang, Leonid Vigderman, Duane Treybig, and Lubrizol Oilfield Solutions, Inc. for US Patent Application Numbers 61/905,340 and 14/308,160, and International Application Numbers PCT/IB14/002490 and PCT/IB14/002498.

Date:

July 27, 2016Dawn A. Brown

STATE OF OHIO
COUNTY OF LAKE
U.S.A.

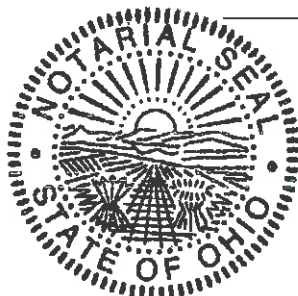
} SS

The foregoing certification by Dawn A. Brown was acknowledged before me *this*

27th day of July, 2016.

Catherine A. Bartel

Notary Public



CATHERINE A. BARTEL
NOTARY PUBLIC • STATE OF OHIO
Recorded in Lorain County
My commission expires Dec. 29, 2017

ASSIGNMENT

Effective November 18, 2013, for good and valuable consideration, the receipt of which is hereby acknowledged to full satisfaction, I hereby sell and assign to:

LUBRIZOL OILFIELD SOLUTIONS, INC., a Delaware corporation having its principal place of business at 29400 Lakeland Blvd., Wickliffe, Ohio 44092-2298

(the Assignee) its successors, legal representatives, and assigns, the entire right, title and interest in, to and under the below-identified Applications and any inventions disclosed therein, and any letters patent of The United States which may be issued thereon, together with all reissues or reexaminations of said letters patent, all divisions and continuations of said application and all applications and patent rights for the inventions disclosed therein in countries foreign to the United States; and I agree to execute all further papers and do all further acts appropriate to fully vest in said Assignee the rights herein conveyed. I further agree that if the Assignee desires to file a disclaimer relating to any invention contained therein in any country, I will, upon its request, sign and deliver all papers requisite for the filing of such disclaimer. I further authorize and request the Commissioner for Patents and Trademarks of the United States to issue said letters patent to the Assignee.

U.S. Provisional No.: 61/905,340
U.S. Serial No.: 14/309,160
PCT Appln. No. PCT/IB14/002490
PCT Appln. No. PCT/IB14/002498

Filed: November 18, 2013
Filed: June 18, 2014
Filed: November 18, 2014
Filed: November 18, 2014

SIGNATURE

Inventor's signature

Rajesh K. Saini

Rajesh K. Saini

Date: July 26, 2016

STATE OF

TEXAS

COUNTY OF

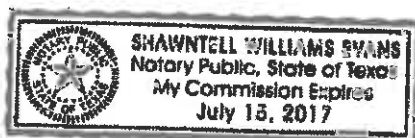
HARRIS

SS:

On this, the 26 day of July, 2016, before me a notary public, personally appeared Rajesh K. Saini, known to me to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Shawntell Williams Evans
Notary Public



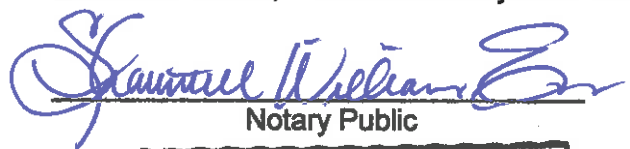
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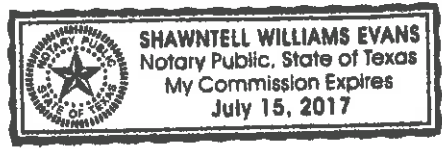
Inventor's signature  Date: July 19/2016
 Clayton S. Smith

STATE OF TEXAS)
)
 COUNTY OF HARRIS) SS:

On this, the ____ day of _____, 2016, before me a notary public, personally appeared Clayton S. Smith, known to me to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.


 Notary Public



SIGNATURE

Inventor's signature _____ Date: _____
 Mathew M. Samuel

STATE OF _____)
)
 COUNTY OF _____) SS:

On this, the ____ day of _____, 2016, before me a notary public, personally appeared Mathew M. Samuel, known to me to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

 Notary Public

SIGNATURE

Inventor's signature _____ Date: _____
 Clayton S. Smith

STATE OF _____)
) SS:
 COUNTY OF _____)

On this, the ____ day of _____, 2016, before me a notary public, personally appeared Clayton S. Smith, known to me to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

 Notary Public

SIGNATURE

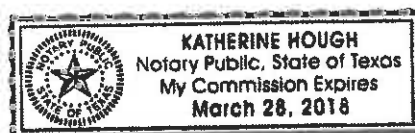
Inventor's signature _____ Date: 7/25/2016
 Mathew M. Samuel

STATE OF Texas)
) SS:
 COUNTY OF Harris)

On this, the 25 day of July, 2016, before me a notary public, personally appeared Mathew M. Samuel, known to me to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Katherine Hough
 Notary Public



SIGNATURE

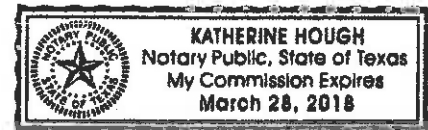
Inventor's signature Kern L. Smith Date: 7/15/2016
Kern L. Smith

STATE OF TEXAS)
COUNTY OF HARRIS) SS:

On this, the 15 day of July, 2016, before me a notary public, personally appeared Kern L. Smith, known to me to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Katherine Hough
Notary Public



SIGNATURE

Inventor's signature _____ Date: _____
Chih-Chau Hwang

STATE OF _____)
COUNTY OF _____) SS:

On this, the ____ day of _____, 2016, before me a notary public, personally appeared Chih-Chau Hwang, known to me to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Notary Public

■■■■■■
SIGNATURE

Inventor's signature _____ Date: _____
Kern L. Smith

STATE OF _____)
COUNTY OF _____) SS:

On this, the ____ day of _____, 2016, before me a notary public, personally appeared Kern L. Smith, known to me to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Notary Public

■■■■■■
SIGNATURE

Inventor's signature _____ Date: 7/19/2016
Chih-Chau Hwang

STATE OF Texas)
COUNTY OF Harris) SS:

On this, the 19th day of July, 2016, before me a notary public, personally appeared Chih-Chau Hwang, known to me to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Adedoyin Ademola
Notary Public



SIGNATURE

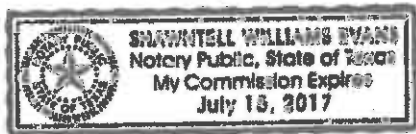
Inventor's signature *Leonid Vigderman* Date: 7/26/16
Leonid Vigderman

STATE OF TEXAS)
COUNTY OF HARRIS) SS:

On this, the 26 day of July, 2016, before me a notary public, personally appeared Leonid Vigderman, known to me to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Shawntell Williams Evans
Notary Public



SIGNATURE

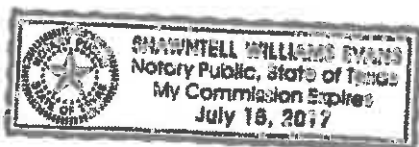
Inventor's signature *Duane Treybig* Date: 7/26/16
Duane Treybig

STATE OF TEXAS)
COUNTY OF HARRIS) SS:

On this, the 26 day of July, 2016, before me a notary public, personally appeared Duane Treybig, known to me to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Shawntell Williams Evans
Notary Public



ACCEPTED:

LUBRIZOL OILFIELD SOLUTIONS, INC. (ASSIGNEE)

By: Teresan W. Gilbert

Teresan W. Gilbert
Chief Intellectual Property Counsel

Date: July 27, 2016

STATE OF OHIO

)

)

SS:

COUNTY OF LAKE

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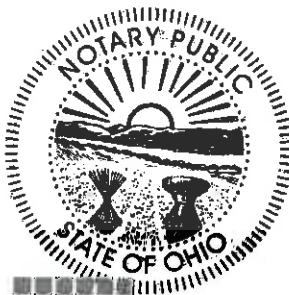
On this, the 27th day of July, 2016, before me a notary public, personally appeared Teresan W. Gilbert, Chief Intellectual Property Counsel of The Lubrizol Corporation, and its affiliates, which includes Lubrizol Oilfield Solutions, Inc., known to me to be the person whose name is subscribed to the within instrument, and acknowledged that she executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Dawn A. Brown

Notary Public

Dawn A. Brown
Notary Public
State of Ohio
My Commission Expires
November 27, 2017



[THIS ASSIGNMENT ENDS ON THIS PAGE]