

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4937730

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT

**CONVEYING PARTY DATA**

Name	Execution Date
GEORGIA-PACIFIC CHEMICALS LLC	03/08/2018

**RECEIVING PARTY DATA**

<b>Name:</b>	INGEVITY SOUTH CAROLINA, LLC
<b>Street Address:</b>	5255 VIRGINIA AVENUE
<b>City:</b>	NORTH CHARLESTON
<b>State/Country:</b>	SOUTH CAROLINA
<b>Postal Code:</b>	29406

**PROPERTY NUMBERS Total: 29**

Property Type	Number
Patent Number:	6087318
Patent Number:	6699822
Patent Number:	7913852
Patent Number:	8011514
Patent Number:	8048332
Patent Number:	8071715
Patent Number:	8092686
Patent Number:	8127930
Patent Number:	8133408
Patent Number:	8133970
Patent Number:	8226848
Patent Number:	8258084
Patent Number:	8334363
Patent Number:	8403146
Patent Number:	8557138
Patent Number:	8580139
Patent Number:	8702993
Patent Number:	8741171
Patent Number:	8757389
Patent Number:	8875898

PATENT

Property Type	Number
Patent Number:	8925729
Patent Number:	8927468
Patent Number:	9403703
Patent Number:	9457357
Patent Number:	9511378
Patent Number:	9566589
Patent Number:	9567655
Patent Number:	9657212
Patent Number:	9868891

**CORRESPONDENCE DATA**

**Fax Number:** (617)227-4420  
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**Correspondent Name:** LOCKE LORD LLP  
**Address Line 1:** PO BOX 55874  
**Address Line 4:** BOSTON, MASSACHUSETTS 02205

<b>ATTORNEY DOCKET NUMBER:</b>	1515137.00015
<b>NAME OF SUBMITTER:</b>	JOY WHITNEY
<b>SIGNATURE:</b>	/joy whitney/
<b>DATE SIGNED:</b>	04/30/2018

**Total Attachments: 18**  
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**PATENT ASSIGNMENT**

**THIS PATENT ASSIGNMENT** (this “*Assignment*”) is made and entered into as of March 8, 2018 (the “*Effective Date*”), by **Georgia-Pacific Chemicals LLC**, a Delaware limited liability company (“*Assignor*”) in favor of **Ingevity South Carolina, LLC**, a Delaware limited liability company (“*Assignee*”).

**WHEREAS**, Assignor and Assignee are among the parties to that certain Asset Purchase Agreement, dated as of August 22, 2017 (as amended, supplemented or modified, the “*Purchase Agreement*”); and

**WHEREAS**, pursuant to the Purchase Agreement, Assignor has sold, conveyed, assigned, and transferred to Assignee, and Assignee has acquired from Assignor, all right, title and interest in, to and under the patents and patent applications set forth on Schedule A and the inventions and improvements described and claimed therein (the “*Patents*”), and the parties wish to record such acquisition in the applicable governmental authorities in any applicable jurisdiction;

**NOW, THEREFORE**, in consideration of the foregoing and in consideration of the mutual promises, covenants, representations, warranties and agreements contained herein and in the Purchase Agreement, Assignor hereby agrees as follows:

1. **Assignment**. Effective as of the Effective Date, Assignor hereby sells, conveys, assigns, and transfers to Assignee, all right, title and interest in, to and under the Patents in the United States and throughout the world, the same to be held and enjoyed by Assignee as fully and completely as by Assignor had this Assignment not been made, including, without limitation, (a) any reissues, renewals, revisions, divisionals, substitutions, continuations, continuations-in-part, patent disclosures, extensions and reexaminations, and foreign equivalents thereof, (b) all patents that issue from the patent applications included in the Patents, (c) all rights therein provided by the laws of the United States or any foreign country, multinational treaties or conventions (including, without limitation, the right to claim priority to any of the Patents), (d) all rights to apply for, prosecute and obtain patents and industrial design registrations in respect of any of the inventions to the extent fully supported by the Patents throughout the world, and (e) all other rights in the foregoing (including, without limitation, the right to collect royalties and proceeds in connection therewith), and all rights and remedies (including, without limitation, the right to sue for and recover damages, profits and any other remedy) for past, present or future infringement, misappropriation, or other violation relating to any of the foregoing, together with any priority right that may arise from any of the foregoing.

2. **Recording**. This Assignment has been executed and delivered by Assignor to Assignee for the purpose of recording this Assignment with any applicable governmental authorities, and the parties hereby authorize any such governmental authorities to record this Assignment.

3. Successors. This Agreement and all of the provisions hereof shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and permitted assigns.

4. Governing Law. This Agreement and all disputes or controversies arising out of or relating to this Agreement or the transactions contemplated hereby shall be governed by, and construed in accordance with, the internal laws of the State of Delaware, without regard to the laws of any other jurisdiction that might be applied because of the conflicts of laws principles of the State of Delaware.


*[Remainder of Page Intentionally Left Blank; Signature Follows]*

IN WITNESS WHEREOF, the parties have entered into this Assignment as of the Effective Date.

ASSIGNOR:

GEORGIA-PACIFIC CHEMICALS LLC

By:

  
Name: David B. Perle

Title: Vice President - Business Development

[Signature page to Patent Assignment]

PATENT  
REEL: 045665 FRAME: 0456

**Schedule A**

Title	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Argentina	Issued	P070102802	Jun 25, 2007	AR061699	Feb 29, 2012
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Argentina	Issued	80102818	Jun 27, 2008	67367	Nov 30, 2016
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Australia	Issued	2007261248	Jun 22, 2007	2007261248	Jun 22, 2007
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Chile	Pending	3403-2005	Dec 22, 2005		
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Chile	Issued	1853-2007	Jun 22, 2007	49,414	Oct 14, 2013
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Chile	Pending	1926-2008	Jun 27, 2008		
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	China	Issued	200780023630.9	Jun 22, 2007	200780023630.9	Jul 31, 2013
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Jordan	Issued	304/2008	Jun 29, 2008	2759	Aug 14, 2014
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Mexico	Issued	MX/a/2008/0164 91	Jun 22, 2007	322863	Aug 18, 2014
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	United States of America	Issued	11/298,948	Dec 12, 2005	7,913,852	Mar 29, 2011
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Venezuela	Pending	2007-001354	Jun 22, 2007		

Title	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Venezuela	Pending	01275-2008	Jun 27, 2008		
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	United States of America	Issued	11/824,230	Jun 29, 2007	8,011,514	Sep 6, 2011
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	United States of America	Issued	11/473,314	Jun 23, 2006	8,092,686	Jan 10, 2012
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Australia	Issued	2005322209	Dec 21, 2005	2005322209	May 3, 2012
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Brazil	Pending	PI0519361-3	Dec 21, 2005		
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Brazil	Pending	PI0812982-7	Jun 11, 2008		
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Canada	Issued	2,591,884	Dec 21, 2005	2,591,884	Feb 18, 2014
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Canada	Issued	2,691,367	Jun 11, 2008	2,691,367	Mar 8, 2016
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	China	Issued	200580044827.1	Dec 21, 2005	200580044827.1	May 29, 2013
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	China	Issued	200880101670.5	Jun 11, 2008	200880101670.5	Nov 14, 2012
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	India	Issued	2541/KOLNP/2007	Dec 21, 2005	257087	Sep 2, 2013

Title	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	India	Pending	9830/DELNP/2008	Jun 22, 2007		
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Republic of Korea	Issued	2007-7016968	Dec 21, 2005	1344292	Dec 17, 2013
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Morocco	Issued	PV/30077	Dec 21, 2005	29152	Jan 2, 2008
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Mexico	Issued	MX/A/07/007702	Dec 21, 2005	292013	Nov 11, 2011
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Mexico	Issued	MX/A/10/000070	Jun 11, 2008	283730	Feb 8, 2011
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Russian Federation	Issued	2007127780	Dec 21, 2005	2420358	Jun 10, 2011
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Russian Federation	Issued	2009102038	Jun 22, 2007	2432998	Nov 10, 2011
MODIFIED AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	South Africa	Issued	2007/04747	Dec 21, 2005	2007/04747	Jun 25, 2008
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Argentina	Issued	P080102817	Jun 27, 2008	AR067366B1	Nov 30, 2016
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Canada	Issued	2,593,508	Jun 22, 2007	2,593,508	Dec 1, 2015
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Chile	Pending	1925-2008	Jun 27, 2008		



Title	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Jordan	Issued	303/2008	Jun 29, 2008	2760	Mar 15, 2014
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	United States of America	Issued	11/298,936	Dec 12, 2005	8,702,993	Apr 22, 2014
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Venezuela	Pending	01276-2008	Jun 27, 2008		
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	United States of America	Issued	11/480,561	Jul 5, 2006	8,757,389	Jun 24, 2014
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	United States of America	Issued	11/823,880	Jun 29, 2007	8,127,930	Mar 6, 2012
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	United States of America	Pending	14/311,409	Jun 23, 2014		
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Australia	Issued	2012200549	Dec 21, 2005	2012200549	Sep 17, 2015
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	China	Issued	201210245437.2	Dec 21, 2005	201210245437.2	May 27, 2015
FROTH FLotation METHOD FOR REMOVING SOLID CONTAMINANTS IN AQUEOUS SLURRY	India	Pending	2639/KOLNP/2013	Dec 21, 2005		
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Mexico	Issued	MX/a/2012/003833	Dec 21, 2005	346184	Mar 10, 2017
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Australia	Issued	2005322210	Dec 21, 2005	2005322210	May 3, 2012

Title	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Brazil	Pending	PI0519363-0	Dec 21, 2005		
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Brazil	Pending	PI0812979-7	Jun 11, 2008		
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Canada	Issued	2,594,243	Dec 21, 2005	2,594,243	Dec 16, 2014
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Canada	Issued	2,692,026	Jun 11, 2008	2,692,026	Mar 8, 2016
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	China	Issued	200580044828.6	Dec 21, 2005	ZL200580044828.6	Mar 16, 2016
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	China	Issued	200880101057.3	Jun 11, 2008	200880101057.3	Apr 3, 2013
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	European Patent Office	Pending	5854997.3	Dec 21, 2005		
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	India	Issued	2540/KOLNP/2007	Dec 21, 2005	264193	Dec 12, 2014
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Morocco	Issued	PV/30078	Dec 21, 2005	29153	Jan 2, 2008
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Mexico	Issued	MX/A/07/007701	Dec 21, 2005	311794	Jul 29, 2013
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Mexico	Issued	MX/A/10/000088	Jun 11, 2008	288426	Jul 18, 2011

Title	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	Russian Federation	Issued	2007127778	Dec 21, 2005	2397026	Aug 20, 2010
AMINE-ALDEHYDE RESINS AND USES THEREOF IN SEPARATION PROCESSES	South Africa	Pending	2007/04746	Dec 21, 2005		
COLLECTORS	United States of America	Issued	12/496,122	Jul 1, 2009	8,403,146	Mar 26, 2013
COLLECTORS	United States of America	Issued	13/777,296	Feb 26, 2013	9,566,589	Feb 14, 2017
COLLECTORS	Australia	Issued	2009267003	Jul 1, 2009	2009267003	Apr 28, 2016
COLLECTORS FOR MINERAL ORE FLOTATION COMPRISING OXIDISED FATTY ACIDS OR MALEATED AND OXIDISED FATTY ACIDS	Canada	Pending	2,729,297	Jul 1, 2009		
COLLECTORS	Chile	Pending	1603-2010	Jul 1, 2009		
COLLECTORS	China	Issued	200980124994.5	Jul 1, 2009	200980124994.5	Apr 9, 2014
COLLECTORS FOR ORE FLOTATION COMPRISING OXIDISED FATTY ACIDS OR MALEATED AND OXIDISED FATTY ACIDS	South Africa	Issued	2010/08481	Jul 1, 2009	2010/08481	Jul 1, 2009
METHOD FOR THE BENEFICIATION OF COAL	United States of America	Issued	12/353,997	Jan 15, 2009	8,925,729	Jan 6, 2015
METHOD FOR THE BENEFICIATION OF COAL	United States of America	Pending	14/585,378	Dec 30, 2014		
METHOD FOR THE BENEFICIATION OF COAL	Australia	Issued	2009206113	Jan 15, 2009	2009206113B2	Dec 19, 2013
METHOD FOR THE BENEFICIATION OF COAL	India	Pending	2340/KOLNP/2010	Jan 15, 2009		
METHOD FOR THE BENEFICIATION OF COAL	South Africa	Issued	2010/04676	Jan 15, 2009	2010/04676	Sep 28, 2011
METHOD FOR THE FROTH FLOTATION OF COAL	United States of America	Issued	12/353,998	Jan 15, 2009	8,875,898	Nov 4, 2014

Title	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
METHOD FOR THE FROTH FLOTATION OF COAL	Australia	Issued	2009210639	Jan 15, 2009	2009210639	Jan 15, 2009
METHOD FOR THE FROTH FLOTATION OF COAL	Canada	Issued	2,713,136	Jan 15, 2009	2,713,136	Sep 13, 2016
METHOD FOR THE FROTH FLOTATION OF COAL	South Africa	Issued	2010/05129	Jan 15, 2009	2010/05129	Sep 28, 2011
PITCHEMULSIONS	United States of America	Issued	12/533,726	Jul 31, 2009	8,133,408	Mar 13, 2012
DEDUSTING COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	United States of America	Issued	12/874,991	Sep 2, 2010	8,580,139	Nov 12, 2013
DEDUSTING COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	United States of America	Issued	14/047,132	Oct 7, 2013	8,741,171	Jun 3, 2014
METHOD FOR INHIBITING ICE FORMATION AND ACCUMULATION	United States of America	Issued	12/615,327	Nov 10, 2009	8,048,332	Nov 1, 2011
METHOD FOR INHIBITING ICE FORMATION AND ACCUMULATION	United States of America	Issued	13/240,207	Sep 22, 2011	8,226,848	Jul 24, 2012
METHOD FOR INHIBITING ICE FORMATION AND ACCUMULATION	Canada	Issued	2,742,829	Nov 10, 2009	2,742,829	Feb 7, 2017
GUANIDINE-BASED POLYMERS FOR SEPARATION PROCESSES	United States of America	Issued	12/822,855	Jun 24, 2010	9,403,703	Aug 2, 2016
GUANIDINE-BASED POLYMERS FOR SEPARATION PROCESSES	Canada	Issued	2,765,038	Jun 24, 2010	2,765,038	Mar 28, 2017
PITCHEMULSIONS	Australia	Issued	2009279811	Jul 31, 2009	2009279811	Dec 11, 2014
PITCHEMULSIONS	Canada	Issued	2,732,315	Jul 31, 2009	2,732,315	Feb 16, 2016
PITCHEMULSIONS	China	Pending	ZL20098012975 7.8	Jul 31, 2009		
PITCHEMULSIONS	United States of America	Issued	13/057,159	Jul 31, 2009	8,557,138	Oct 15, 2013
PITCHEMULSIONS	South Africa	Issued	2011/00527	Jul 31, 2009	2011/00527	Jun 27, 2012
MIXED COLLECTOR COMPOSITIONS	United States of America	Issued	14/088,585	Nov 25, 2013	9,457,357	Oct 4, 2016
MIXED COLLECTOR COMPOSITIONS	Australia	Issued	2013352266	Nov 27, 2013	2013352266	Dec 22, 2016

File	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
MIXED COLLECTOR COMPOSITIONS	Brazil	Pending	112015012316-3	Nov 27, 2013		
MIXED COLLECTOR COMPOSITIONS	Canada	Pending	2,892,741	Nov 27, 2013		
MIXED COLLECTOR COMPOSITIONS	Chile	Pending	01447-2015	Nov 27, 2013		
MIXED COLLECTOR COMPOSITIONS	China	Pending	201380069158.8	Nov 27, 2013		
MIXED COLLECTOR COMPOSITIONS	India	Pending	1587/KOLNP/2015	Nov 27, 2013		
MIXED COLLECTOR COMPOSITIONS	Mexico	Pending	MX/a/2015/006812	Nov 27, 2013		
MIXED COLLECTOR COMPOSITIONS	South Africa	Pending	2015/03798	Nov 27, 2013		
PROCESSES FOR THE SEPARATION OF ORES	United States of America	Issued	14/056,498	Oct 17, 2013	9,567,655	Feb 14, 2017
COLLECTOR COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	United States of America	Issued	14/509,086	Oct 8, 2014	9,511,378	Dec 6, 2016
COLLECTOR COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	Australia	Pending	2014331945	Oct 8, 2014		
COLLECTOR COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	Brazil	Pending	BR1120160080238	Oct 8, 2014		
COLLECTOR COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	Canada	Pending	2,927,000	Oct 8, 2014		
COLLECTOR COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	Chile	Pending	00826-2016	Oct 8, 2014		
COLLECTOR COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	China	Pending	201480064537.2	Oct 8, 2014		

Title	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
COLLECTOR COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	Morocco	Pending	39021	Oct 8, 2014		
COLLECTOR COMPOSITIONS AND METHODS FOR MAKING AND USING SAME	South Africa	Pending	2016/02645	Oct 8, 2014		
DEPRESSANTS FOR USE IN SEPARATION PROCESSES	United States of America	Pending	14/534,764	Nov 6, 2014		
DEPRESSANTS FOR USE IN SEPARATION PROCESSES	ARIPO	Pending	AP/P/2016/009228	Nov 6, 2014		
DEPRESSANTS FOR USE IN SEPARATION PROCESSES	Australia	Pending	2014346696	Nov 6, 2014		
DEPRESSANTS FOR USE IN SEPARATION PROCESSES	Canada	Pending	2,929,930	Nov 6, 2014		
DEPRESSANTS FOR USE IN SEPARATION PROCESSES	Chile	Pending	2016-01091	Nov 6, 2014		
DEPRESSANTS FOR USE IN SEPARATION PROCESSES	China	Pending	201480068770.8	Nov 6, 2014		
DEPRESSANTS FOR USE IN SEPARATION PROCESSES	Eurasian Patent Office	Pending	201690958	Nov 6, 2014		
DEPRESSANTS FOR USE IN SEPARATION PROCESSES	Morocco	Pending	39023	Nov 6, 2014		
DEPRESSANTS FOR USE IN SEPARATION PROCESSES	OAPI	Pending	1201600171	Nov 6, 2014		
DEPRESSANTS FOR USE IN SEPARATION PROCESSES	Saudi Arabia	Pending	516371086	Nov 6, 2014		
DEPRESSANTS FOR USE IN SEPARATION PROCESSES	South Africa	Pending	2016/03134	Nov 6, 2014		
CATIONIC COLLECTORS WITH MIXED POLYAMIDOAMINES AND METHODS FOR MAKING AND USING SAME	United States of America	Pending	14/920,844	Oct 22, 2015		
METHODS AND COLLECTORS FOR PURIFYING PHOSPHOROUS CONTAINING MATERIALS	United States of America	Pending	14/920,848	Oct 22, 2015		

Title	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
POLYAMIDAMINE CATIONIC COLLECTORS AND METHODS FOR MAKING AND USING SAME	United States of America	Pending	14/920,855	Oct 22, 2015		
PROCESS TO PRODUCE DISPROPORTIONATED ROSIN BASED EMULSIFIER FOR EMULSION POLYMERIZATION	United States of America	Issued	09/174,446	Oct 19, 1998	6,087,318	Jul 11, 2000
SULFATED DICARBOXYLIC ACIDS FOR LUBRICATION, EMULSIFICATION AND CORROSION INHIBITION	Canada	Issued	2,431,190	Jun 5, 2003	2,431,190	Jan 29, 2013
SULFATED DICARBOXYLIC ACIDS FOR LUBRICATION, EMULSIFICATION AND CORROSION INHIBITION	United States of America	Issued	10/163,630	Jun 7, 2002	6,699,822	Mar 2, 2004
SPRAY DRIED EMULSIFIER COMPOSITIONS, METHODS FOR THEIR PREPARATION AND THEIR USE IN OIL-BASED DRILLING FLUID COMPOSITIONS	Gulf Cooperation Council	Issued	P/2007/8378	May 23, 2007		Dec 31, 2013
SPRAY DRIED EMULSIFIER COMPOSITIONS, METHODS FOR THEIR PREPARATION AND THEIR USE IN OIL-BASED DRILLING FLUID COMPOSITIONS	Kuwait	Pending	GCC/P/2007/7640	Jan 20, 2007		
SPRAY DRIED EMULSIFIER COMPOSITIONS, METHODS FOR THEIR PREPARATION AND THEIR USE IN OIL-BASED DRILLING FLUID COMPOSITIONS	United States of America	Issued	11/333,535	Jan 18, 2006	8,258,084	Sep 4, 2012
SPRAY DRIED EMULSIFIER COMPOSITIONS, METHODS FOR THEIR PREPARATION AND THEIR USE IN OIL-BASED DRILLING FLUID COMPOSITIONS	United States of America	Issued	13/563,896	Aug 1, 2012	8,927,468	Jan 6, 2015

File	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
SPRAY DRIED EMULSIFIER COMPOSITIONS, METHODS FOR THEIR PREPARATION AND THEIR USE IN OIL-BASED DRILLING FLUID COMPOSITIONS	United States of America	Issued	14/585,394	Dec 30, 2014	9,657,212	May 23, 2017
SPRAY DRIED EMULSIFIER COMPOSITIONS, METHODS FOR THEIR PREPARATION AND THEIR USE IN OIL-BASED DRILLING FLUID COMPOSITIONS	United States of America	Pending	15/595,272	May 15, 2017		
CHEMICAL MODIFICATION OF MALEATED FATTY ACIDS	Peru	Issued	1130	Jul 3, 2008	6678	Nov 29, 2012
CHEMICAL MODIFICATION OF MALEATED FATTY ACIDS	China	Issued	201110325257.0	Jul 2, 2008	201110325257.0	Feb 11, 2015
CHEMICAL MODIFICATION OF MALEATED FATTY ACIDS	Canada	Issued	2,704,147	Jul 2, 2008	2,704,147	Aug 11, 2015
CHEMICAL MODIFICATION OF MALEATED FATTY ACIDS	Mexico	Issued	MX/a/2010/000091	Jul 2, 2008	335322	Dec 3, 2015
OXIDIZED AND MALEATED COMPOUNDS AND COMPOSITIONS	Argentina	Issued	P080100416	Feb 1, 2008	AR065126B1	Jan 17, 2017
OXIDIZED AND MALEATED COMPOUNDS AND COMPOSITIONS	Chile	Pending	334/2008	Feb 1, 2008		
MALEATED AND OXIDIZED FATTY ACIDS	United States of America	Issued	11/669,713	Jan 31, 2007	8,071,715	Dec 6, 2011
OXIDIZED AND MALEATED COMPOUNDS AND COMPOSITIONS	Venezuela	Pending	00327-2008	Feb 18, 2008		
OXIDIZED AND MALEATED COMPOUNDS AND COMPOSITIONS	United States of America	Issued	12/023,886	Jan 31, 2008	8,334,363	Dec 18, 2012
OXIDIZED AND MALEATED COMPOUNDS AND COMPOSITIONS	Hong Kong	Issued	10103502.3	Apr 9, 2010	1137476	Aug 8, 2014
OXIDIZED AND MALEATED COMPOUNDS AND COMPOSITIONS	Brazil	Pending	PI0806562-4	Jan 31, 2008		
OXIDIZED AND MALEATED COMPOUNDS AND COMPOSITIONS	Canada	Issued	2,676,557	Jan 31, 2008	2,676,557	Aug 4, 2015



Title	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
OXIDIZED AND MALEATED COMPOUNDS AND COMPOSITIONS	China	Issued	200880003786.5	Jan 31, 2008	200880003786.5	Nov 6, 2013
OXIDIZED AND MALEATED COMPOUNDS AND COMPOSITIONS	European Patent Office	Pending	8728736.3	Jan 31, 2008		
OXIDIZED AND MALEATED COMPOUNDS AND COMPOSITIONS	Mexico	Issued	MX/A/09/007856	Jan 31, 2008	300054	Jun 8, 2012
OXIDIZED AND MALEATED COMPOUNDS AND COMPOSITIONS	Russian Federation	Issued	2009132474	Jan 31, 2008	2495072	Oct 10, 2013
OXIDIZED AND MALEATED DERIVATIVE COMPOSITIONS	United States of America	Issued	12/363,483	Jan 30, 2009	8,133,970	Mar 13, 2012
OXIDIZED AND MALEATED DERIVATIVE COMPOSITION	Hong Kong	Issued	11107722.7	Jul 25, 2011	1153424	Mar 7, 2014
OXIDIZED AND MALEATED DERIVATIVE COMPOSITION	Brazil	Pending	PI0906980.1	Jan 30, 2009		
OXIDIZED AND MALEATED DERIVATIVE COMPOSITION	Canada	Issued	2,713,773	Jan 30, 2009	2,713,773	May 30, 2017
OXIDIZED AND MALEATED DERIVATIVE COMPOSITION	China	Issued	200980107438.7	Jan 30, 2009	200980107438.7	Jul 10, 2013
OXIDIZED AND MALEATED DERIVATIVE COMPOSITION	European Patent Office	Pending	9705569.3	Jan 30, 2009		
OXIDIZED AND MALEATED DERIVATIVE COMPOSITION	Mexico	Issued	MX/A/10/008310	Jan 30, 2009	301084	Jul 6, 2012
OXIDIZED AND MALEATED DERIVATIVE COMPOSITION	Russian Federation	Issued	2010136319	Jan 30, 2009	2506994	Feb 20, 2014
METHODS FOR PRODUCING EMULSIFIERS FOR OIL-BASED DRILLING FLUIDS	Argentina	Pending	20140103119	Aug 19, 2014		
METHODS FOR PRODUCING EMULSIFIERS FOR OIL-BASED DRILLING FLUIDS	Kuwait	Pending	PA 90/2014	Aug 19, 2014		
METHODS FOR PRODUCING EMULSIFIERS FOR OIL-BASED DRILLING FLUIDS	United States of America	Pending	14/461,460	Aug 18, 2014	9,868,891	Jan 16, 2018

Title	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
METHODS FOR PRODUCING EMULSIFIERS FOR OIL-BASED DRILLING FLUIDS	United States of America	Pending	15/871,986	Jan 16, 2018		
METHODS FOR PRODUCING EMULSIFIERS FOR OIL-BASED DRILLING FLUIDS	Australia	Pending	2014309168	Aug 18, 2014		
METHODS FOR PRODUCING EMULSIFIERS FOR OIL-BASED DRILLING FLUIDS	Canada	Pending	2,921,917	Aug 18, 2014		
METHODS FOR PRODUCING EMULSIFIERS FOR OIL-BASED DRILLING FLUIDS	China	Pending	201480053898.7	Aug 18, 2014		
METHODS FOR PRODUCING EMULSIFIERS FOR OIL-BASED DRILLING FLUIDS	Eurasian Patent Office	Pending	201690432	Aug 18, 2014		
METHODS FOR PRODUCING EMULSIFIERS FOR OIL-BASED DRILLING FLUIDS	European Patent Office	Pending	14837231.1	Aug 18, 2014		
MODIFIED HYDROCARBON RESINS AS FLUID LOSS ADDITIVES	United States of America	Pending	14/546,310	Nov 18, 2014		
MODIFIED HYDROCARBON RESINS AS FLUID LOSS ADDITIVES	Saudi Arabia	Pending	517381424	Nov 18, 2014		
MODIFIED HYDROCARBON RESINS AS FLUID LOSS ADDITIVES	United Arab Emirates	Pending	611/2016	Nov 18, 2014		
MODIFIED HYDROCARBON RESINS AS FLUID LOSS ADDITIVES	Australia	Pending	2014353215	Nov 18, 2014		
MODIFIED HYDROCARBON RESINS AS FLUID LOSS ADDITIVES	Brazil	Pending	BR 1120160114329	Nov 18, 2014		
MODIFIED HYDROCARBON RESINS AS FLUID LOSS ADDITIVES	Canada	Pending	2,931,283	Nov 18, 2014		
MODIFIED HYDROCARBON RESINS AS FLUID LOSS ADDITIVES	China	Pending	201480071529.0	Nov 18, 2014		
MODIFIED HYDROCARBON RESINS AS FLUID LOSS ADDITIVES	Eurasian Patent Office	Pending	201691038	Nov 18, 2014		

Title	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
MODIFIED HYDROCARBON RESINS AS FLUID LOSS ADDITIVES	European Patent Office	Pending	14863577.4	Nov 18, 2014		
MODIFIED HYDROCARBON RESINS AS FLUID LOSS ADDITIVES	Mexico	Pending	MX/a/2016/006592	Nov 18, 2014		
EMULSIFIER PARTICLES AND METHODS FOR MAKING AND USING SAME	United States of America	Pending	14/952,953	Nov 26, 2015		
EMULSIFIER PARTICLES AND METHODS FOR MAKING AND USING SAME	Canada	Pending	2969134	Nov 26, 2015		
EMULSIFIER PARTICLES AND METHODS FOR MAKING AND USING SAME	China	Pending	201580064791.7	Nov 26, 2015		
EMULSIFIER PARTICLES AND METHODS FOR MAKING AND USING SAME	Eurasian Patent Office	Pending	201791175	Nov 26, 2015		
EMULSIFIER PARTICLES AND METHODS FOR MAKING AND USING SAME	European Patent Office	Pending	158623827	Nov 26, 2015		
EMULSIFIER PARTICLES AND METHODS FOR MAKING AND USING SAME	Malaysia	Pending	P12017701855	Nov 26, 2015		
EMULSIFIER PARTICLES AND METHODS FOR MAKING AND USING SAME	Mexico	Pending	MXa2017006996	Nov 26, 2015		
PROCESS TO PRODUCE DISPROPORTIONATED ROSIN BASED EMULSIFIER FOR EMULSION POLYMERIZATION	United States of America	Issued	09/174,446	Oct 19, 1998	6,087,318	Jul 11, 2000
PLASTIC COMPOSITIONS THAT INCLUDE PLASTICIZERS CONTAINING AN ACYLATED PHENOLATED FATY ACID ESTER	United States of America	Pending	15/094,431	Apr 8, 2016		

Title	Country	Status	Application Number	Date Filed	Patent Number	Grant Date
PLASTICIZERS CONTAINING ESTERIFIED FATTY ACID PHENYL ETHER ESTERS AND METHODS FOR MAKING AND USING SAME	PCT	Pending	PCT/US16/52641	Sep 20, 2016		

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