505142794 10/16/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5189560

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ARAMCO SERVICES COMPANY	06/28/2018

RECEIVING PARTY DATA

Name:	SAUDI ARABIAN OIL COMPANY
Street Address:	1 EASTERN AVENUE
City:	DHAHRAN
State/Country:	SAUDI ARABIA
Postal Code:	31311

PROPERTY NUMBERS Total: 2

Property Type	Number
Application Number:	15946447
PCT Number:	US2018026247

CORRESPONDENCE DATA

Fax Number: (617)502-5002

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.

Phone: 617-248-5000

Email: PatentDocket@choate.com

Correspondent Name: CHOATE HALL & STEWART LLP-PATENT DOCKET

Address Line 1: TWO INTERNATIONAL PLACE

Address Line 4: BOSTON, MASSACHUSETTS 02110

ATTORNEY DOCKET NUMBER:	2012737-0012 -0010
NAME OF SUBMITTER:	JOHN V. FORCIER
SIGNATURE:	/John V. Forcier/
DATE SIGNED:	10/16/2018

Total Attachments: 6

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PATENT REEL: 047173 FRAME: 0198

ASSIGNMENT

This Intellectual Property Assignment ("Assignment") is made by Aramco Services Company (hereinafter "ASSIGNOR"), a Delaware corporation, having offices at Two Allen Center, 1200 Smith Street, Houston, TX 77002, in favor of Saudi Arabian Oil Company (hereinafter "ASSIGNEE"), a company with limited liability, having a usual place of business at 1 Eastern Avenue, Dhahran 31311, SAUDI ARABIA, duly organized and existing under the laws of the Kingdom of Saudi Arabia and established by Royal Decree M/8 dated 4/4/1409 H., together recognized as "PARTIES";

WHEREAS, the PARTIES previously executed an Intellectual Property Assignment, dated as of April 13, 2015, in which the PARTIES agreed that ASSIGNOR shall assign intellectual property to ASSIGNEE;

ANGRADAN SETTANASA ARITA BATUTTIANAN BIARBA ANGRADAN ATANDARA TATUT BATUTTAN BATUTTAN ARITA BATUTTAN ARITA

WHERBAS, ASSIGNOR is aware of the patent applications entitled:

	entified by United States Appli	-	15/946,447	
filed in the Ur	nited States Patent and Tradem	ark Office on	April 5, 2018	_; and
	ntified by International Patent	1 (A. A. 1)	PCT/US2018/026247	
filed on	April 5, 2018	; and		
	ntified by Gulf Cooperation Co		No. 35087	
filed on	April 5, 2018	; and		
x an	d is also aware of the following	g priority applicatio	ons:	
X an	d is also aware of the followin	g priority applicatio	ons:	-1
x an	Serial No.		Filed	
x an	·		· · · · · · · · · · · · · · · · · · ·	—

including the rights in and to any non-provisional patent applications that claim priority to said patent application and any continuations, divisionals, reissues, re-examinations, extensions, substitutions, corresponding foreign patent applications and foreign patents arising out of said patent application, any future patents related thereto, in whole or in part, or issuing therefrom, and the inventions described and/or claimed in said patent application (referred to collectively hereinafter as the "PATENT RIGHTS"), and

WHEREAS, ASSIGNEE desires to acquire or confirm an interest therein;

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Page 1 of 5

NOW, THEREFORE, to all whom it may concern be it known that, for good and valuable consideration, the receipt and sufficiency of which is hereby mutually acknowledged, ASSIGNOR has sold, assigned, and transferred and by these presents does hereby sell, assign and transfer unto ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to the inventions described and/or claimed in said PATENT RIGHTS, together with ASSIGNOR's entire right, title and interest in and to the patent application noted above and such other patents as may issue thereon or claim priority under United States law or international convention, including but not limited to non-provisionals, continuations, divisionals, reissues, reexaminations, extensions, and substitutions of said patent(s) and patent application(s); said inventions, patent application(s) and patent(s) to be held and enjoyed by ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said patent(s) may be granted as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made; ASSIGNOR hereby conveys all of its rights arising under or pursuant to any and all United States laws and international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for patent, including but not limited to any cause(s) of action and damages accruing prior to this assignment;

AND, ASSIGNOR hereby acknowledges that this assignment, being of its entire right, title and interest in and to said inventions, patent application(s) and patent(s), carries with it the right in ASSIGNEE to apply for an obtain from competent authorities in all countries of the world any and all patents by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all patents to ASSIGNEE in its own name as assignee of ASSIGNOR's entire right, title and interest therein;

AND, ASSIGNOR hereby further agrees for itself and its successors, assigns, agents, and legal representatives to provide statements or testimony in any interference or proceeding in which said patent(s) or patent application(s) or inventions directed thereto may be involved; to communicate to ASSIGNEE, its successors, assigns and legal representatives, any facts known to ASSIGNOR regarding said inventions, and to testify in any legal proceedings, sign all lawful papers, make all rightful oaths, and generally execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid inventions to ASSIGNEE, its successors, assignees, and legal representatives, including the execution of non-provisional, continuation, divisional, reissue, reexamination, extension, substitution, or corresponding foreign or international patent applications, and generally do everything possible to aid ASSIGNEE, its successors, assigns and legal representatives, to obtain, record and enforce full protection for the inventions in all countries, but in each instance at ASSIGNEE's reasonable expense;

Page 2 of 5

2012737-0010 -0011 -0012 (SA2058/ASC0155)

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AND, ASSIGNOR does hereby authorize and request the Director of the United States Patent and Trademark Office and any officials of any country or countries other than the United States, whose duty is to issue patents or other forms of industrial property protection, to issue the same as shall be granted upon any application relating to said PATENT RIGHTS to ASSIGNEE, its successors, assigns, or legal representatives;

AND, ASSIGNOR covenants and agrees that it has full right to convey the entire right, title, and interest assigned, and it has not executed and will not execute any agreement in conflict herewith;

IN TESTIMONY WHEREOF, ASSIGNOR and ASSIGNEE by their duly authorized representative acting on their own free will have caused this instrument to be duly executed and have hereunto set his hand and affixed our seal on the dates set forth below.

Page 3 of 5

2012737-0010 -0011 -0012 (SA2058/ASC0155)

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Arameo Services	Company		
Signature:	246065	Date:	June 28, 2018
Name (printed):	Bobby J. Horton		
Title (printed):	General Counsel		

The undersigned (whose title is supplied below) is authorized to act on behalf of

Page 4 of 5

2012737-0010 -0011 -0012 (8A2058/ASC0155)

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Saudi Arabian O	il Company		
Signature:		_ Date:	
Name (printed):	Melton E. Knotts		
Title (printed):	Accietant Comorata Sacratory		

The undersigned (whose title is supplied below) is authorized to act on behalf of

Page 5 of 5

2012737-0010 -0011 -0012 (\$A2058/ASC0155)

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PATENT REEL: 047173 FRAME: 0203

POWER OF ATTORNEY AND ACCEPTANCE BY ASSIGNEE

I hereby appoint the attorneys associated with United States Patent & Trademark Office Customer Number 148219 (as that term is used in 37 C.F.R. 1.32(a)(5)) as my/our attorneys for the purpose of accepting assignments in any jurisdiction in which acceptance by Saudi Arabian

Oil Company as ASSIGNEE is necessary or desirable. I also hereby authorize the attorneys
associated with Customer Number 148219 to insert any information necessary or desirable to
identify the subject matter of the assignment into this Acceptance by Assignee (including, but
not limited to, docket number, SA reference and/or application number). I declare under penalty
of perjury under the laws of the United States of America, and under penalty of the laws of any
other jurisdiction before which this document may be presented, that (check all that apply):
x I am an officer of the above-identified ASSIGNEE,
$\boxed{\mathbf{x}}$ I have signed this document on behalf of ASSIGNEE with the full authority of its board of directors
and that all of the foregoing is true and correct.
SIGNATURE DATE: June 10, 2018
NAME: Melton E. Knotts TITLE: Assistant Corporate Secretary COMPANY: Saudi Arabian Oil Company
I declare under penalty of perjury under the laws of the United States of America, and
under penalty of the laws of any other jurisdiction before which this document may be presented
that I am an attorney associated with Customer Number 148219; and, based on the foregoing
Power of Attorney, I hereby accept this assignment on behalf of Saudi Arabian Oil Company
as ASSIGNEE.
SIGNATURE: /Charles E. Lyon/ DATE: October 16, 2018
NAME: Charles E. Lyon, DPhil, JD
USPTO REG. NO.: 56,630
868643664

RECORDED: 10/16/2018

PATENT REEL: 047173 FRAME: 0204