

<b>PATENT ASSIGNMENT COVER SHEET</b>
--------------------------------------

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT6156615

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
EMAD NAJI AL-SHAFEI	05/13/2020
MOHAMED AL-BAHAR	05/13/2020
ALI NADER AL-JISHI	05/13/2020
KI-HYOUK CHOI	05/13/2020
ALI AL-NASIR	05/13/2020
MOHAMMAD AL-JISHI	05/13/2020
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SAUDI ARABIAN OIL COMPANY
<b>Street Address:</b>	1 EASTERN AVENUE
<b>City:</b>	DHAHRAN
<b>State/Country:</b>	SAUDI ARABIA
<b>Postal Code:</b>	31311
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16681517
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<i>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.</i>	
<b>Phone:</b>	713-223-2300
<b>Email:</b>	docketing@bracewell.com
<b>Correspondent Name:</b>	BRACEWELL LLP
<b>Address Line 1:</b>	P.O. BOX 61389
<b>Address Line 4:</b>	HOUSTON, TEXAS 77208-1389
<b>ATTORNEY DOCKET NUMBER:</b>	0004159.051357
<b>NAME OF SUBMITTER:</b>	KEVIN R. TAMM
<b>SIGNATURE:</b>	/Kevin R. Tamm/
<b>DATE SIGNED:</b>	06/16/2020
<b>Total Attachments: 7</b>	

source=SA51357\_Assignment-signed#page1.tif  
source=SA51357\_Assignment-signed#page2.tif  
source=SA51357\_Assignment-signed#page3.tif  
source=SA51357\_Assignment-signed#page4.tif  
source=SA51357\_Assignment-signed#page5.tif  
source=SA51357\_Assignment-signed#page6.tif  
source=SA51357\_Assignment-signed#page7.tif

**ASSIGNMENT**

WHEREAS, WE, Emad Naji **AL-SHAFEI**, a citizen of Saudi Arabia, Mohamed **AL-BAHAR**, a citizen of Saudi Arabia, Ali Nader **AL-JISHI**, a citizen of Saudi Arabia, Ki-Hyouk **CHOI**, a citizen of Korea, Ali **AL-NASIR**, a citizen of Saudi Arabia, and Mohammad **AL-JISHI**, a citizen of Saudi Arabia, are inventors of **SYSTEMS AND METHODS FOR CATALYTIC UPGRADING OF VACUUM RESIDUE TO DISTILLATE FRACTIONS AND OLEFINS WITH STEAM**, for which a non-provisional application for United States Letters Patent was filed on November 12, 2019 as Serial No. 16/681,517; and

WHEREAS, SAUDI ARABIAN OIL COMPANY, a Company with Limited Liability of Saudi Arabia, with a business address of 1 Eastern Avenue, Dhahran 31311, Saudi Arabia, hereafter "SAUDI ARAMCO", is desirous of acquiring the entire right, title and interest in and to the aforesaid invention throughout the world, and all right, title and interest in, to and under any and all Letters Patent of the United States and all other countries throughout the world;

NOW, THEREFORE, for and in consideration of the sum of One Dollar (\$1.00) to us in hand paid by SAUDI ARAMCO and for other good and valuable considerations, the receipt of which is hereby acknowledged, we hereby sell, assign, transfer and set over to SAUDI ARAMCO, all right, title and interest in and to the said invention throughout the world, and said application for U.S. Letters Patent, and any and all divisions, continuations, reexaminations and reissues thereof, and any and all Letters Patent of the United States and foreign countries which may be granted therefor, the same to be held and enjoyed by them for their own use and benefit, and for the use and benefit of their successors, assigns, or other legal representatives, to the end of the term or terms for which said Letters Patent of the United States or foreign countries are or may be granted, reexamined or reissued, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

And we hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all Letters Patent of the United States on said invention or resulting from said application and from any and all divisions, continuations, and reissues thereof, to SAUDI ARAMCO, as assignee of our entire interest, and hereby covenant that we have the full right to

convey the entire interest herein assigned, and that we have not executed and will not execute any agreement in conflict herewith.

And we further hereby covenant and agree that we will, at any time, upon request, execute and deliver any and all papers that may be necessary or desirable to perfect the title of said invention and to such Letters Patent as may be granted therefor, to SAUDI ARAMCO, its successors, assigns, or other legal representatives and that if SAUDI ARAMCO shall desire to file any divisional or continuation applications or to secure a reexamination or reissue of such Letters Patent, or to file a disclaimer relating thereto, will upon request, sign all papers, make all rightful oaths and do all lawful acts requisite for the filing of such divisional or continuation application, or such application for reissue and the procuring thereof, and for the filing of such disclaimer, without further compensation but at the expense of said assignee, its successors, or other legal representatives.

And we do further covenant and agree that we will, at any time upon request, communicate to SAUDI ARAMCO, its successors, assigns or other legal representatives, such facts relating to said invention and Letters Patent or the file history thereof as may be known to us, and testify as to the same in any interference or other litigation when requested so to do, without further compensation but at the expense of said assignee, its successors, or other legal representatives.

EXECUTED THIS 13 day of May, 2020.

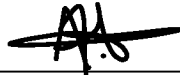
  
\_\_\_\_\_  
Emad Naji **AL-SHAFEI**

EXECUTED THIS 13 day of May, 2020.

A handwritten signature in black ink, appearing to read 'Mohamed', written over a horizontal line.

Mohamed AL-BAHAR

EXECUTED THIS 13 day of May, 2020.



---

Ali Nader AL-JISHI

EXECUTED THIS 13 day of May, 2020.

*Choi*

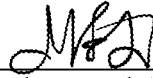
\_\_\_\_\_  
Ki-Hyok **CHOI**

EXECUTED THIS 13th day of May, 2020.

  
\_\_\_\_\_  
Ali AL-NASIR



EXECUTED THIS 13 day of 05, 2020.



\_\_\_\_\_  
Mohammad **AL-JISHI**