

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT7079016

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	PATENT SECURITY AGREEMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
THE CLEAVER BROOKS COMPANY, INC.	12/10/2021
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	ROYAL BANK OF CANADA
<b>Street Address:</b>	20 KING STREET WEST, 14TH FLOOR
<b>City:</b>	TORONTO
<b>State/Country:</b>	CANADA
<b>Postal Code:</b>	M5H 1C4
<b>PROPERTY NUMBERS Total: 11</b>	
<b>Property Type</b>	<b>Number</b>
Patent Number:	7409301
Patent Number:	9477242
Patent Number:	10288300
Patent Number:	10690344
Application Number:	16142988
Application Number:	16455253
Application Number:	16047851
Application Number:	63158617
Application Number:	63174330
Application Number:	13185797
Application Number:	13185819
<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>Email:</b>	yoosonlee@paulhastings.com
<b>Correspondent Name:</b>	YOOSON SANDY LEE
<b>Address Line 1:</b>	200 PARK AVENUE
<b>Address Line 4:</b>	NEW YORIK, NEW YORK 10166
<b>NAME OF SUBMITTER:</b>	YOOSON SANDY LEE

<b>SIGNATURE:</b>	/YOOSON SANDY LEE/
<b>DATE SIGNED:</b>	12/16/2021
	This document serves as an Oath/Declaration (37 CFR 1.63).
<b>Total Attachments: 6</b> source=RBC-Cleaver-Brooks- Patent Security Agreement - EXECUTED#page1.tif source=RBC-Cleaver-Brooks- Patent Security Agreement - EXECUTED#page2.tif source=RBC-Cleaver-Brooks- Patent Security Agreement - EXECUTED#page3.tif source=RBC-Cleaver-Brooks- Patent Security Agreement - EXECUTED#page4.tif source=RBC-Cleaver-Brooks- Patent Security Agreement - EXECUTED#page5.tif source=RBC-Cleaver-Brooks- Patent Security Agreement - EXECUTED#page6.tif	

## PATENT SECURITY AGREEMENT

**PATENT SECURITY AGREEMENT** dated as of December 10, 2021 (this “*Agreement*”), among THE CLEAVER-BROOKS COMPANY, INC., a Texas corporation (the “*Grantor*”), and ROYAL BANK OF CANADA (“*Royal Bank*”), as collateral agent (in such capacity, the “*Collateral Agent*”).

Reference is made to (a) the US Pledge and Security Agreement dated as of December 19, 2012 (as amended, supplemented or otherwise modified from time to time, the “*Security Agreement*”), among The Cleaver-Brooks Company, Inc., a Texas corporation (the “*US Borrower*”), the grantors party thereto and the Collateral Agent, and (b) the Credit and Guarantee Agreement dated as of December 19, 2012 (as amended, restated, supplemented or otherwise modified from time to time, the “*Credit Agreement*”), among the US Borrower, Cleaver-Brooks of Canada Limited, a company organized under the laws of Ontario, Canada (the “*Canadian Borrower*”, and together with the US Borrower, the “*Borrowers*”), the guarantors party thereto, the lenders party thereto (the “*Lenders*”) and Royal Bank, as administrative agent, collateral agent and issuing bank. The Lenders have agreed to extend credit to the Borrowers subject to the terms and conditions set forth in the Credit Agreement. The obligations of the Lenders to extend such credit are conditioned upon, among other things, the execution and delivery of this Agreement. Each Grantor (other than the Borrowers) is an affiliate of the Borrowers, will derive substantial benefits from the extensions of credit to the Borrowers pursuant to the Credit Agreement and is willing to execute and deliver the Security Agreement and this Agreement in order to induce the Lenders to extend such credit. Pursuant to the Security Agreement, the Grantor is required to execute and deliver this Agreement. Accordingly, the parties hereto agree as follows:

**SECTION 1. Terms.** Each capitalized term used but not defined in this Agreement has the meaning given or ascribed to it in the Security Agreement. The rules of construction specified in Article I of the Security Agreement also apply to this Agreement.

**SECTION 2. Grant of Security Interest.** As security for the payment or performance, as the case may be, in full of the Secured Obligations (as defined in the Credit Agreement), each Grantor hereby pledges to the Collateral Agent, its successors and assigns, for the ratable benefit of the Secured Parties, and hereby grants to the Collateral Agent, its successors and assigns, for the ratable benefit of the Secured Parties, a security interest in all right, title or interest in or to any and all of the following assets and properties now owned or at any time hereafter acquired by such Grantor or in which such Grantor now has or at any time in the future may acquire any right, title or interest (collectively, the “*Patent Collateral*”):

- (a) all patents issued by the United States or the equivalent thereof in any other country, and all applications for patents of the United States or the equivalent thereof in any other country, including issued patents and pending applications in the United States Patent and Trademark Office (or any successor or any similar offices in any other country),

including those United States and Canadian patents and patent applications listed on Schedule I;

(b) all reissues, continuations, divisions, continuations-in-part, renewals or extensions thereof, and the inventions disclosed or claimed therein, including the right to make, use and/or sell the inventions disclosed or claimed therein ((a) and (b) collectively, the “*Patents*”); and

(c) all Proceeds and products of any and all of the foregoing, all Supporting Obligations and all collateral security and guarantees given by any Person with respect to any of the foregoing.

**SECTION 3. Recordation.** This Agreement has been executed and delivered by each Grantor for the purpose of recording the grant of security interest herein with the United States Patent and Trademark Office and the Canadian Intellectual Property Office (“CIPO”), if applicable. Each Grantor authorizes and requests that the Commissioner of Patents and Trademarks at the United States Patent and Trademark Office, or the Registrar at CIPO, if applicable, record this Agreement.

**SECTION 4. Security Agreement.** The security interests granted to the Collateral Agent herein are granted in furtherance, and not in limitation of, the security interests granted to the Collateral Agent pursuant to the Security Agreement. Each Grantor hereby acknowledges and affirms that the rights and remedies of the Collateral Agent with respect to the Patent Collateral are more fully set forth in the Security Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the Security Agreement, the terms of the Security Agreement shall govern, and for the avoidance of doubt, Patent Collateral shall not include any Excluded Collateral.

**SECTION 5. Counterparts.** This Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original but all of which when taken together shall constitute a single contract. Delivery of an executed signature page to this Agreement by facsimile transmission or other electronic transmission (including by .pdf, .tif or similar format) shall be as effective as delivery of a manually signed counterpart of this Agreement.

**SECTION 6. Further Assurances.** Each Grantor further agrees to execute and deliver to the Collateral Agent any and all further documents and instruments, and do any and all further acts which the Collateral Agent (or the Collateral Agent’s agents or designees) reasonably requests in order to confirm this grant of security interest in and to the Patent Collateral.

**SECTION 7. Applicable Law.** THIS AGREEMENT SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF NEW YORK.

*[Remainder of this page intentionally left blank]*

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement  
as of the day and year first above written.

THE CLEAVER-BROOKS COMPANY, INC.

By: \_\_\_\_\_

Name: Darren Allen

Title: Treasurer and Secretary


[Signature Page to US Patent Security Agreement]

200423.03606/127483517v.3

**PATENT**  
**REEL: 058533 FRAME: 0409**

Acknowledged and Agreed by:

ROYAL BANK OF CANADA,  
as Collateral Agent

By: \_\_\_\_\_

Name: Susan Khokher

Title: Manager, Agency

[Signature Page to US Patent Security Agreement]

**PATENT**  
**REEL: 058533 FRAME: 0410**

# **SCHEDULE I TO PATENT SECURITY AGREEMENT**

<b>Title:</b>	<b>Country</b>	<b>Application #</b>	<b>Date Filed</b>	<b>Patent #</b>	<b>Grant Date</b>	<b>Current Owner</b>
BOILER WATER LEVEL MONITORING AND CONTROL SYSTEM	United States of America	10/742,008	Dec 19, 2003	7409301	Aug 5, 2008	The Cleaver-Brooks Company, Inc.
SYSTEM AND METHOD OF CONTROLLING CONDENSING AND NON-CONDENSING BOILER FIRING RAT...	United States of America	13/655,661	Oct 19, 2012	9477242	Oct 25, 2016	The Cleaver-Brooks Company, Inc.
SYSTEM AND METHOD OF CONTROLLING CONDENSING AND NON-CONDENSING BOILER FIRING RAT...	United States of America	15/332,470	Oct 24, 2016	10288300	May 14, 2019	The Cleaver-Brooks Company, Inc.
SYSTEM AND METHOD OF CONTROLLING CONDENSING AND NON-CONDENSING BOILER FIRING RAT...	Canada	2,792,823	Oct 19, 2012	2792823	Oct 15, 2019	The Cleaver-Brooks Company, Inc.
BOILER SYSTEM AND METHOD OF OPERATING SAME	United States of America	15/138,899	Apr 26, 2016	10690344	Jun 23, 2020	The Cleaver-Brooks Company, Inc.
REDUCED SIZE FIRE TUBE BOILER SYSTEM	Canada	2,989,805	Jun 18, 2015			The Cleaver-Brooks Company, Inc.
REDUCED SIZE FIRE TUBE BOILER SYSTEM AND METHOD OF OPERATING SAME	United States of America	16/142,988	Sep 26, 2018			The Cleaver-Brooks Company, Inc.
BURNER WITH ADJUSTABLE END CAP AND METHOD OF OPERATING SAME	United States of America	16/455,253	Jun 27, 2019			The Cleaver-Brooks Company, Inc.

MODULAR HEAT RECOVERY STEAM GENERATOR SYSTEM FOR RAPID INSTALLATION	United States of America	16/047,851	Jul 27, 2018			The Cleaver-Brooks Company, Inc.
Auxiliary Boiler Systems and Methods of Operating and Implementing Same	United States of America	63/158,617	Mar 9, 2021			The Cleaver-Brooks Company, Inc.
Thermal Efficiency System and Method for Boiler Plant	United States of America	63/174,330	Apr 13, 2021			The Cleaver-Brooks Company, Inc.
Oil recovery process	United States of America	13/185,797		8899326	12/2/2014	The Cleaver-Brooks Company, Inc.
Force circulation steam generator	United States of America	13/185,819		9897309	2/20/2018	The Cleaver-Brooks Company, Inc.
Oil recovery process	Canada	CA2881165		CA2881165	8/1/2017	The Cleaver-Brooks Company, Inc.
Oil recovery process	Canada	CA2758407		CA2758407	5/5/2015	The Cleaver-Brooks Company, Inc.
System and Method for Predicting Shutdown Alarms in Boiler Using Machine Learning	PCT	PCT/US2021/016255	Feb 2, 2021			The Cleaver-Brooks Company, Inc.

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REEL: 058533 FRAME: 0412