

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5901040

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
CFOAM CORP.	12/06/2019
CFOAM LLC	12/06/2019

RECEIVING PARTY DATA

Name:	CONSOL ENERGY INC.
Street Address:	1000 CONSOL ENERGY DRIVE, SUITE 100
City:	CANONSBURG
State/Country:	PENNSYLVANIA
Postal Code:	15317-6506

PROPERTY NUMBERS Total: 31

Property Type	Number
Patent Number:	6656239
Patent Number:	6689470
Patent Number:	6749652
Patent Number:	6849098
Patent Number:	6860910
Patent Number:	6869455
Patent Number:	6899970
Patent Number:	7192537
Patent Number:	7247368
Patent Number:	7481855
Patent Number:	7544222
Patent Number:	7628973
Patent Number:	7736729
Patent Number:	7766984
Patent Number:	7767183
Patent Number:	7824645
Patent Number:	7867608
Patent Number:	7883683
Patent Number:	7902116

PATENT

Property Type	Number
Patent Number:	7931961
Patent Number:	7960656
Patent Number:	8021638
Patent Number:	8034266
Patent Number:	8048528
Patent Number:	8071065
Patent Number:	8071206
Patent Number:	8105512
Application Number:	16587816
Application Number:	62743634
Application Number:	62743639
Application Number:	62839239

CORRESPONDENCE DATA

Fax Number: (214)932-6499

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: 2149326400

Email: sshernandez@mcguirewoods.com

Correspondent Name: STEPHANIE HERNANDEZ

Address Line 1: 2000 MCKINNEY AVENUE, SUITE 1400

Address Line 2: MCGUIREWOODS LLP

Address Line 4: DALLAS, TEXAS 75201

ATTORNEY DOCKET NUMBER: 2039094-0133

NAME OF SUBMITTER: STEPHANIE HERNANDEZ

SIGNATURE: /Stephanie Hernandez/

DATE SIGNED: 01/08/2020

Total Attachments: 11

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INTELLECTUAL PROPERTY SECURITY AGREEMENT

THIS INTELLECTUAL PROPERTY SECURITY AGREEMENT (this “Agreement”), dated as of December 6, 2019, is made by and between CFOAM Corp., a Delaware corporation (“Parent Guarantor”), CFOAM LLC, a Delaware limited liability company (“CFOAM LLC”, and together with Parent Guarantor, each a “Grantor” and, collectively, the “Grantors”), and CONSOL ENERGY INC., a Delaware corporation (“Lender”). Capitalized terms used in this Agreement which are not defined herein shall have the meanings set forth in the Pledge and Security Agreement (as defined below).

WHEREAS, Lender and Grantors are parties to that certain Pledge and Security Agreement dated as of the date hereof (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Security Agreement”); and

WHEREAS, pursuant to the Security Agreement, each Grantor has granted to Lender a security interest in all of its Collateral, including, without limitation, all Intellectual Property (including, without limitation, the Intellectual Property described herein).

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound, each Grantor hereby represents, warrants, covenants and agrees as follows:

1. **Grant of Security Interest.** To secure all of such Grantor’s Obligations to Lender, each Grantor grants and pledges to Lender a security interest in all of such Grantor’s right, title and interest in, to and under its Intellectual Property, including, without limitation: (a) all trademarks and servicemarks, including, without limitation, those listed on **Schedule A** hereto, together with the goodwill connected with the use thereof and symbolized thereby, whether registered or not, and all applications to register and registrations of the same and like protections, but excluding the United States intent-to-use trademark applications to the extent that, and solely during the period in which, the grant of a security interest therein would impair, under applicable federal law, the registrability of such applications or the validity or enforceability of registrations issuing from such applications, (b) all patents and patent applications, including, without limitation, those listed on **Schedule B** hereto and all like protections including, without limitation, all improvements, provisionals, divisionals, continuations, renewals, reissues, extensions and continuations-in-part of the same, (c) all copyrights, maskworks, software, computer programs and other works of authorship, whether registered or unregistered (including all works based on or derived from or incorporating) and including, without limitation, those registered copyrights listed on **Schedule C** hereto, and all extensions and renewals thereof, (d) all rights to recover for past or future infringement of any of the foregoing, (e) all domain name registrations, together with all goodwill of the business connected with or symbolized by the domain names, including, without limitation, those domain name registrations listed on **Schedule D** hereto, (f) all right, title and interest in and to any and all present and future license agreements with respect to any of the foregoing, (g) all present and future accounts, accounts receivable and other rights to payment arising from, in connection with or relating to any of the foregoing, (h) all proceeds and products of the foregoing, including, without limitation, all payments under insurance or any indemnity or warranty payable with respect to any of the foregoing; and (i) all rights of any kind whatsoever of such Grantor accruing under any of the foregoing provided by applicable law of any jurisdiction, by international treaties and conventions, and otherwise throughout the world.

2. **Representations and Warranties.** Each Grantor represents and warrants that: (a) listed on **Schedule A** hereto are all trademark and service mark registrations and pending trademark and service mark applications owned by such Grantor, (b) listed on **Schedule B** are all issued patents and patent applications owned by such Grantor, (c) listed on **Schedule C** are all copyright applications, and

copyright registrations owned by such Grantor, and (d) listed on **Schedule D** are all domain name registrations owned by such Grantor.

3. **Recordation.** Each Grantor authorizes the Commissioner for Patents, the Commissioner for Trademarks and the Register of Copyrights and any domain name registry or other government officials to record and register this Agreement upon request by Lender.

4. **Loan Documents.** This Agreement has been entered into pursuant to and in conjunction with the Security Agreement, which is hereby incorporated by reference. The provisions of the Security Agreement shall supersede and control over any conflicting or inconsistent provision herein. The rights and remedies of Lender with respect to the Collateral are as provided by the Security Agreement and related documents, and nothing in this Agreement shall be deemed to limit such rights and remedies.

5. **Execution in Counterparts.** This Agreement may be executed in counterparts (and by different parties hereto in 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 counterpart of a signature page to this Agreement by facsimile or in electronic (i.e., "pdf" or "tif" format) shall be effective as delivery of a manually executed counterpart of this Agreement.

6. **Successors and Assigns.** This Agreement will be binding on and shall inure to the benefit of the parties hereto and their respective successors and assigns.

7. **Governing Law.** This Agreement and all acts, transactions disputes and controversies arising hereunder or relating hereto, and all rights and obligations of Lender and Grantors shall be governed by, and construed in accordance with the internal laws of the Commonwealth of Pennsylvania without regard to conflict of laws principles, provided that Lender shall retain all rights arising under federal law.

[signatures on next page]

IN WITNESS WHEREOF, intending to be legally bound, Grantors have caused this Agreement to be duly executed as of the date first above written.

GRANTOR:

CFOAM LLC

By: 

Name: Flemming Bjoernslev

Title: Chief Executive Officer

CFOAM CORP.

By: 

Name: Flemming Bjoernslev

Title: Chief Executive Officer

[Signature Page to Intellectual Property Security Agreement]

PATENT
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LENDER:

CONSOL ENERGY INC.

By: 

Name: Daniel P. Connell

Title: Vice President - Business Development & Technology

[Signature Page to Intellectual Property Security Agreement]

PATENT
REEL: 051455 FRAME: 0031

SCHEDULE A

Case Type	Mark	Status	Filed	Ser. No.	Reg. No.	Date Issued	Country
US Trademark	CFOAM B&W LOGO	Registered	3/20/2018	87841032	5,659,509	1/22/2019	US
US Trademark	PFOAM	Abandoned	1/31/2017	87319676		7/22/2019	US
US Trademark	CFOAM	Registered	12/6/2004	78527842	3,028,815	12/13/2005	US
US Trademark	CSTONE	Registered	9/11/2007	77276826	3,944,594	4/12/2011	US
US Trademark	CFOAM	Registered	9/8/1999	75794233	2,559,559	4/9/2002	US
Foreign Trademark	CFOAM	Registered	9/12/2004	4180543	4180543	5/5/2008	EU
Foreign Trademark	CFOAM	Registered	12/17/2004		4420272	4/6/1998	China
Foreign Trademark	CFOAM	Registered	12/17/2004		4420273	4/6/1998	China
Foreign Trademark	CFOAM	Active	9/12/2004	4918205			Japan
Foreign Trademark	CFOAM	Inactive					Korea

SCHEDULE B

Patent Number	Patent Name	Inventors	Assignee	Application Number	Date Filed	Date Issued
6656239	Blended Pitch/Coal Based Carbon Foams	Darren Kenneth Rogers, Janusz Wladyslaw Plucinski	Borrower	10/068,075	2/5/2002	2/2/2003
6689470	Thermal Protection System	Brian Joseph	Borrower	09/944,273	8/31/2001	2/10/2004
6749652	Cellular Coal Products and Processes	Darren Kenneth Rogers	Borrower	09/902,828	7/10/2001	6/15/2004
6849098	Composite Tooling	Brian Joseph, Darren Kenneth Rogers	Borrower	09/941,342	8/29/2001	2/1/2005
6860910	Carbon Foam Abrasives	Darren Kenneth Rogers, Janusz Wladyslaw Plucinski	Borrower	09/976,425	10/12/2001	3/1/2005
6869455	Carbon Foam Abrasives	Darren Kenneth Rogers, Janusz Wladyslaw Plucinski	Borrower	10/068,074	2/5/2002	3/22/2005
6899970	Electrochemical Cell Electrodes Comprising Coal-Based Carbon Foam	Darren Kenneth Rogers, Janusz Wladyslaw Plucinski	Borrower	09/888,977	6/25/2001	5/31/2005
7192537	Radar Emissions Absorbing Material	Rick Lucas	Borrower	11/022,994	12/3/2004	3/20/2007
7247368	Stealth Foam and Production Method	Darren Kenneth Rogers	Borrower	09/976,426	10/12/2001	7/24/2007
7481855	Carbon Foam Abrasives	Darren Kenneth Rogers, Janusz Wladyslaw Plucinski	Borrower	10/810,844	3/29/2004	1/27/2009
7544222	Activated, Coal-Based Carbon Foam	Darren Kenneth Rogers, Janusz Wladyslaw Plucinski	Borrower	10/810,900	3/29/2004	6/9/2009
7628973	Simultaneous Production of High Density Carbon Foam Sections	Thomas Matviya	Borrower	11/619,223	1/3/2007	12/8/2009
7736729	Blast Energy Mitigating Composite	Susan Chang, Douglas Merriman	Borrower	11/165,580	8/12/2005	6/15/2010
7766984	Method of Increasing Carbon Foam Yield	Rick Lucas Thomas Matviya	Borrower	11/082,342	3/17/2005	8/3/2010
7767183	Production of Carbon Foam From Coals	Thomas Matviya	Borrower	11/561,521	11/20/2006	8/3/2010
7824645	High Density Carbon From Coal	Dwayne Morgan Rick Lucas	Borrower	11/039,775	1/20/2005	11/2/2010
7867608	Electrically Gradated Carbon Foam	Jesse Blacker, Janusz Wladyslaw Plucinski	Borrower	11/964,036	12/25/2007	1/11/2011

Patent Number	Patent Name	Inventors	Assignee	Application Number	Date Filed	Date Issued
7883683	Carbon Foam and High Density Carbon Foam Assembly	Thomas Matviya	Borrower	11/751,651	5/22/2007	2/8/2011
7902116	Fluid Treatment with Activated Carbon and Carbon Foam	Isaac Post, Thomas Matviya	Borrower	11/747,371	5/11/2007	3/8/2011
7931961	Composite Exhaust Flue	Rick Lucas, Douglas Merriman, Gregg Wolfe, Brian Gordon	Borrower	12/170,457	7/10/2008	4/26/2011
7960656	Carbon Bonded Carbon Foam EMI Shielding Enclosures	Thomas Matviya	Borrower	11/421,845	6/2/2006	6/14/2011
8021638	Carbon Foam and High Denisty Carbon Foam Composite Tooling	Thomas Matviya	Borrower	11/751,668	5/22/2007	9/20/2011
8034266	Carbon Foam From Metallic salts of Lignosulfonates	Drew Spradling, Doug Amie	Borrower	10/909,832	8/3/2004	10/11/2011
8048528	Cellular Coal Products	Thomas Matviya, Darren Kenneth Rogers	Borrower	11/142,960	6/2/2005	11/1/2011
8071065	High Density Carbon Foam Composite Tooling	Thomas Matviya	Borrower	11/751,670	5/22/2007	12/6/2011
8071206	Blast Energy Mitigating Composite	Susan Chang, Douglas Merriman, Jesse Blacker, Rick Lucas	Borrower	12/135,154	6/7/2008	12/6/2011
8105512	Infiltrated Carbon Foam Composites	Rick Lucas, Harry Danford, Janusz Wladyslaw Plucinski, Douglas Merriman, Jesse Blacker	Borrower	12/506,976	7/21/2009	1/31/2012
N/A	Method for Pore Stabilized Carbon Foam	Rudolph Olson III Christopher Yurchick Doug Amie Bruce Hines	Borrower	16587816	9/30/2019	N/A
N/A	Low Cost Thermally Conductive Carbon Foam for Tooling and other Applications/ High Thermal Conductivity for Carbon Foam Tooling	Rudolph Olson III	Borrower	62743634	10/10/2019	N/A
N/A	Low Cost Thermally Conductive Carbon Foam for Tooling and other Applications/Low	Rudolph Olson III Christopher Yurchick Doug Amie Bruce Hines	Borrower	62743639	10/10/2019	N/A

Patent Number	Patent Name	Inventors	Assignee	Application Number	Date Filed	Date Issued
	Pressure Manufacture of Carbon Foam					
N/A	Phosphate Bonded Ceramic Coating for Carbon Foam	Rudolph Olson III	Borrower	62839239	4/26/2019	

- (b) Nonexclusive Commercial Patent License Agreement, dated February 10, 2017, by and between UT-Battelle, LLC, as Licensors, and Carbon Innovations, LLC, as Licensee.
- (c) License Back Agreement, dated October 21, 2016, by and between Carbon Innovations, LLC, as Licensors, and Touchstone Research Laboratory, LTD., as Licensee.
- (i) Confirmatory License granted by Touchstone Research Laboratory, LTD. to the United States Air Force in Patent No. 6,656,239.

Executive Order 9424, Confirmatory License granted by Touchstone Research Laboratory, LTD. to Secretary of the United States Navy in Patent Application No. 09/902,828.

Confirmatory License granted by Touchstone Research Laboratory, LTD. to the United States Air Force in Patent Application No. 09/941,342.

Executive Order 9424, Confirmatory License granted by Touchstone Research Laboratory, LTD. to Secretary of the United States Navy in Patent Application No. 09/976,425.

Executive Order 9424, Confirmatory License granted by Touchstone Research Laboratory, LTD. to Secretary of the United States Navy in Patent Application No. 10/068,074.

Executive Order 9424, Confirmatory License granted by Touchstone Research Laboratory, LTD. to Secretary of the United States Navy in Patent Application No. 10/888,977.

Executive Order 9424, Confirmatory License granted by Touchstone Research Laboratory, LTD. to Secretary of the United States Navy in Patent Application No. 09/976,426.

Executive Order 9424, Confirmatory License granted by Touchstone Research Laboratory, LTD. to Secretary of the United States Navy in Patent Application No. 10/810,844.

Confirmatory License granted by Touchstone Research Laboratory, LTD. to the United States Air Force in Patent Application No. 11/082,342.

Executive Order 9424, Confirmatory License granted by Touchstone Research Laboratory, LTD. to Secretary of the United States Navy in Patent Application No. 11/561,521.

Executive Order 9424, Confirmatory License granted by Touchstone Research Laboratory, LTD. to Secretary of the United States Air Force in Patent Application No. 11/039,775.

SCHEDULE C

None.

SCHEDULE D

Domain Name	Account No.	Points To	Private	Folder	Auto Renew	Expiration Date	WHOIS	WHOIS	Account Holder
							Administrative Contact	Technical Contact	
carbonfoam.net	35540827	ADNS Services	No	Default	Off	1/17/2022	CFOAM	CFOAM	CFOAM
carbonfoam.org	35540828	ADNS Services	No	Default	Off	1/17/2022	CFOAM	CFOAM	CFOAM
foam.com	35540829	ADNS Services	No	Default	Off	8/17/2023	CFOAM	CFOAM	CFOAM
foam.info	35540830	Under Construction Page	No	Default	Off	4/12/2023	CFOAM	CFOAM	CFOAM
foam.net	35540831	ADNS Services	No	Default	Off	1/17/2022	CFOAM	CFOAM	CFOAM
foam.org	35540832	ADNS Services	No	Default	Off	1/17/2022	CFOAM	CFOAM	CFOAM

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