# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 Assignment ID: PATI494366

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	RELEASE OF SECURITY INTEREST

### **CONVEYING PARTY DATA**

Name	Execution Date	
MSD PCOF PARTNERS XLV, LLC	08/30/2024	

### **RECEIVING PARTY DATA**

Company Name:	The Babcock & Wilcox Company
Street Address:	1200 E. Market Street
Internal Address:	Suite 650
City:	Akron
State/Country:	OHIO
Postal Code:	44305
Company Name:	Diamond Power international, LLC
Street Address:	1200 E. Market Street
Internal Address:	Suite 650
City:	Akron
State/Country:	OHIO
Postal Code:	44305
Company Name:	Americon LLC
Street Address:	1200 E. Market Street
Internal Address:	Suite 650
City:	Akron
State/Country:	ОНЮ
Postal Code:	44305

#### **PROPERTY NUMBERS Total: 153**

Property Type	Number
Patent Number:	6613133
Patent Number:	6887435
Patent Number:	6874715
Patent Number:	6454824
Patent Number:	6609483
Patent Number:	6495268
Patent Number:	6800149

PATENT REEL: 069017 FRAME: 0362

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Property Type	Number
Patent Number:	6273030
Patent Number:	6532905
Patent Number:	6485174
Patent Number:	6748880
Patent Number:	6967005
Patent Number:	6655397
Patent Number:	6764030
Patent Number:	6782902
Patent Number:	6609669
Patent Number:	6852945
Patent Number:	6783091
Patent Number:	6951454
Patent Number:	6695018
Patent Number:	7021248
Patent Number:	6338306
Patent Number:	6869459
Patent Number:	7275589
Patent Number:	7243619
Patent Number:	7182045
Patent Number:	7028926
Patent Number:	7100521
Patent Number:	8114359
Patent Number:	7832366
Patent Number:	7282087
Patent Number:	7392751
Patent Number:	7475645
Patent Number:	6925969
Patent Number:	7493876
Patent Number:	7637699
Patent Number:	7926432
Patent Number:	7901647
Patent Number:	7931710
Patent Number:	8607718
Patent Number:	8113824
Patent Number:	7587996
Patent Number:	7721680
Patent Number:	7615086
Patent Number:	7587995

Property Type	Number
Patent Number:	7735435
Patent Number:	7585476
Patent Number:	7464669
Patent Number:	7559294
Patent Number:	7730908
Patent Number:	7637233
Patent Number:	8684070
Patent Number:	8136544
Patent Number:	7842251
Patent Number:	7842113
Patent Number:	9192889
Patent Number:	10208951
Patent Number:	8795416
Patent Number:	8001788
Patent Number:	8042497
Patent Number:	8327809
Patent Number:	8635976
Patent Number:	9212816
Patent Number:	8176883
Patent Number:	8350176
Patent Number:	8047162
Patent Number:	8240049
Patent Number:	8453585
Patent Number:	8413967
Patent Number:	8777190
Patent Number:	8136851
Patent Number:	9194609
Patent Number:	8991323
Patent Number:	8561557
Patent Number:	8716169
Patent Number:	9874350
Patent Number:	8286595
Patent Number:	7865996
Patent Number:	8795618
Patent Number:	8277726
Patent Number:	6540812
Patent Number:	6611440
Patent Number:	7704302

Property Type	Number		
Patent Number:	8007566		
Patent Number:	8404020		
Patent Number:	8328907		
Patent Number:	8303919		
Patent Number:	9242211		
Patent Number:	9989244		
Patent Number:	9874346		
Patent Number:	8691719		
Patent Number:	8821823		
Patent Number:	9481837		
Patent Number:	9345992		
Patent Number:	9327250		
Patent Number:	10213738		
Patent Number:	9377191		
Patent Number:	10589226		
Patent Number:	9920955		
Patent Number:	8671890		
Patent Number:	9458838		
Patent Number:	9939178		
Patent Number:	10124968		
Patent Number:	10478775		
Application Number:	16116272		
Patent Number:	10471384		
Patent Number:	10215399		
Application Number:	15868466		
Patent Number:	7452403		
Patent Number:	8056229		
Patent Number:	9896308		
Patent Number:	10018431		
Patent Number:	9802140		
Patent Number:	9375718		
Patent Number:	8915679		
Patent Number:	7637002		
Application Number:	16779750		
Patent Number:	10653996		
Application Number:	16850673		
Application Number:	16445721		
Application Number:	17332894		

Property Type	Number		
Patent Number:	9902615		
Application Number:	63145601		
Application Number:	63076665		
Patent Number:	6718915		
Patent Number:	7430970		
Patent Number:	8522729		
Patent Number:	9221009		
Patent Number:	8807991		
Patent Number:	8092766		
Patent Number:	7993615		
Patent Number:	9127857		
Patent Number:	9273884		
Patent Number:	8828340		
Patent Number:	9366458		
Patent Number:	10197267		
Patent Number:	8802043		
Patent Number:	10018356		
Patent Number:	8715600		
Patent Number:	9933154		
Patent Number:	9192890		
Patent Number:	9097158		
Patent Number:	10471386		
Patent Number:	10429062		
Patent Number:	10429061		
Patent Number:	10415825		
Patent Number:	10253972		
Patent Number:	10234169		
Patent Number:	10144661		
Patent Number:	10113536		
Patent Number:	9901856		
Patent Number:	10987626		
Patent Number:	10415819		

### **CORRESPONDENCE DATA**

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Address Line 4: Atlanta, GEORGIA 30309

ATTORNEY DOCKET NUMBER:	28393.515001
NAME OF SUBMITTER:	Angela Olchaskey
SIGNATURE:	Angela Olchaskey
DATE SIGNED:	09/13/2024
	This document serves as an Oath/Declaration (37 CFR 1.63).

#### **Total Attachments: 16**

source=Babcock Patent#page1.tiff source=Babcock Patent#page2.tiff source=Babcock Patent#page3.tiff source=Babcock Patent#page4.tiff source=Babcock Patent#page5.tiff source=Babcock Patent#page6.tiff source=Babcock Patent#page7.tiff source=Babcock Patent#page8.tiff source=Babcock Patent#page9.tiff source=Babcock Patent#page10.tiff source=Babcock Patent#page11.tiff source=Babcock Patent#page12.tiff source=Babcock Patent#page13.tiff source=Babcock Patent#page14.tiff source=Babcock Patent#page15.tiff source=Babcock Patent#page16.tiff

#### RELEASE OF SECURITY INTERESTS IN PATENTS

This RELEASE OF SECURITY INTERESTS IN PATENTS (this "Release"), dated as of this 30th day of August 2024 (the "Effective Date"), is made by MSD PCOF PARTNERS XLV, LLC (the "Agent"), in favor of The Babcock & Wilcox Company, a Delaware corporation, Babcock & Wilcox SPIG, Inc., a New Jersey corporation, Babcock & Wilcox Technology, LLC, a Delaware limited liability company, and Diamond Power International, LLC, a Delaware limited liability company (each a "Grantor" and collectively the "Grantors").

WHEREAS, pursuant to that certain Notice of Grant of Security Interest in Patents, dated as of June 30, 2021, executed by Grantors in favor of Agent and recorded with the United States Patent and Trademark Office (the "<u>USPTO</u>") on July 22, 2021 at Reel/Frame 056962/0486, and the Reimbursement, Guaranty and Security Agreement referred to therein, the Grantors granted to the Agent a continuing security interest in and continuing lien upon the patents and patent applications listed on <u>Schedule 1</u> attached hereto (the "Patents"); and

WHEREAS, the Grantors have requested that the Agent release and the Agent has agreed to release the liens and security interests granted to the Agent by the Grantors with respect to the Patents.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Agent hereby agrees as follows:

- 1. <u>Release</u>. The Agent, without representation or warranty of any kind, hereby releases, discharges, terminates and cancels all of its security interests in and continuing lien upon the Patents and reassigns to the Grantors any and all such right, title and interest that it may have in the Patents. The Agent authorizes and requests that the USPTO and any applicable government officer note and record the release hereby given and any other filings necessary to evidence the release of the Agent's rights with respect to the Patents.
- 2. <u>Governing Law</u>. This Release and all matters relating hereto or arising herefrom (whether arising under contract law, tort law or otherwise) shall, in accordance with Section 5-1401 of the General Obligations Law of the State of New York, be governed by and construed in accordance with the laws of the State of New York.

[Signature page follows]

DB1/ 143744319.2

IN WITNESS WHEREOF, the Agent has caused this Release to be executed by its duly authorized representative as of the Effective Date:

MSD PCOF PARTNERS XLV, LLC

By:

Name: Marcello Liguori Title: Vice President

[Signature Page to IP Release]

# SCHEDULE 1

# <u>PATENTS</u>

Patent Title	Owner/Current	Application	Application/Filing	Patent Number	Issue
	Assignee	Number	Date		Date
SINGLE SPRAY LEVEL FOR	The Babcock &	09/969333	01-Oct-2001	6613133	02-Sep-
FLUE GAS DESULFURIZATION	Wilcox				2003
SYSTEM WITH INTERNAL	Company				
MAIN FEED HEADERS					
INTEGRATED AIR FOIL AND	The Babcock &	09/602483	23-Jun-2000	6887435	03-May-
AMMONIA INJECTION GRID	Wilcox				2005
FOR SCR SYSTEM	Company				
EL TYPE PULVERIZERS	The Babcock &	09/698558	27-Oct-2000	6874715	05-Apr-
	Wilcox				2005
	Company				
CFB IMPACT TYPE PARTICLE	The Babcock &	09/865332	25-May-2001	6454824	24-Sep-
COLLECTION ELEMENTS	Wilcox				2002
ATTACHED TO COOLED	Company				
SUPPORTS					
SYSTEM FOR CONTROLLING	The Babcock &	10/085715	27-Feb-2002	6609483	26-Aug-
FLUE GAS EXIT	Wilcox				2003
TEMPERATURE FOR OPTIMAL	Company				
SCR OPERATIONS					
TAPERED CORROSION	The Babcock &	09/670897	28-Sep-2000	6495268	17-Dec-
PROTECTION OF TUBES AT	Wilcox				2002
MUD DRUM LOCATION	Company				
TAPERED CORROSION	The Babcock &	10/284625	31-Oct-2002	6800149	05-Oct-
PROTECTION OF TUBES AT	Wilcox				2004
MUD DRUM LOCATION	Company				
SPACER BAR WITH TUBE	The Babcock &	09/680725	06-Oct-2000	6273030	14-Aug-
SLEEVE AND TAB	Wilcox				2001
	Company				
CFB WITH CONTROLLABLE	The Babcock &	09/906993	17-Jul-2001	6532905	18-Mar-
IN-BED HEAT EXCHANGER	Wilcox				2003
	Company				
ATTACHABLE HEAT FLUX	The Babcock &	09/697866	27-Oct-2000	6485174	18-Mar-
MEASURING DEVICE	Wilcox				2003
	Company				

Patent Title	Owner/Current Assignee	Application Number	Application/Filing Date	Patent Number	Issue Date
BOILER INTERNAL FLUE GAS BY-PASS DAMPER FOR FLUE GAS TEMPERATURE CONTROL	The Babcock & Wilcox Company	10/024874	19-Dec-2001	6748880	15-Jun- 2004
CIRCULATING FLUIDIZED BED REACTOR WITH SELECTIVE CATALYTIC REDUCTION	The Babcock & Wilcox Company	09/958622	07-Jan-2002	6967005	22-Nov- 2005
ARTICULATING WATER MONITOR CLEANING DEVICE	Diamond Power International, LLC	10/036173	26-Dec-201	6655397	02-Dec- 2003
SOOTBLOWER NOZZLE ASSEMBLY WITH AN IMPROVED DOWNSTREAM NOZZLE	Diamond Power International, LLC	10/039430	02-Jan-2002	6764030	20-Jul- 2004
SOOTBLOWER LANCE TUBE FOR DUAL CLEANING MEDIA	Diamond Power International, LLC	10/049303	05-Feb-2002	6782902	31-Aug- 2004
HYDRAULIC LOADING SYSTEM FOR BALL AND RING PULVERIZERS	The Babcock & Wilcox Company	09/948823	07-Sep-2001	6609669	26-Aug- 2003
LASER WELDED BOILER TUBE WALL PANELS	The Babcock & Wilcox Company	10/175297	19-Jun-2002	6852945	08-Feb- 2005
TWO-FLUTED HOUSING LINER	The Babcock & Wilcox Company	10/056825	25-Jan-2002	6783091	31-Aug- 2004
DUAL FUEL BURNER FOR A SHORTENED FLAME AND REDUCED POLLUTANT EMISSIONS	The Babcock & Wilcox Company	10/443287	21 -May-2003	6951454	04-Oct- 2005
IMPROVED COLLECTION SCOOP FOR FGD BLEED STREAM OR EX SITU OXIDATION	The Babcock & Wilcox Company	10/166589	10-Jun-2002	6695018	24-Feb- 2004
PASSIVE SYSTEM FOR OPTIMAL NOX REDUCTION VIA SELECTIVE CATALYTIC REDUCTION	The Babcock & Wilcox Company	10/236854	06-Sep-2002	7021248	04-Apr- 2006

Patent Title	Owner/Current	Application	Application/Filing	Patent Number	Issue
A CIL II ANIDI INICI ONGODONA	Assignee	Number	Date	(22020)	Date
ASH HANDLING SYSTEM	Diamond Power International, LLC	18-Oct-2000	09/691562	6338306	15-Jan- 2002
IMPACT TYPE PARTICLE SEPARATOR MADE OF MUTUALLY INVERTED U- SHAPED ELEMENTS	The Babcock & Wilcox Company	10/447688	29-May-2003	6869459	22-Mar- 2005
ANTI-VIBRATION BARS FOR BOILER TUBES WITH PROTECTIVE SHIELDS	The Babcock & Wilcox Company	10/802688	17-Mar-2004	7275589	02-Oct- 2007
DUAL PRESSURE RECOVERY BOILER	The Babcock & Wilcox Company	10/969125	20-Oct-2004	7243619	17-Jul- 2007
SPLIT RING CASTING FOR BOILER TUBES WITH TUBE SHIELDS	The Babcock & Wilcox Company	10/802474	17-Mar-2004	7182045	27-Feb- 2007
SOOTBLOWER NOZZLE ASSEMBLY WITH NOZZLES HAVING DIFFERENT GEOMETRIES	Diamond Power International, LLC	10/808047	24-Mar-2004	7028926	18-Apr- 2006
BAFFLE FOR INCREASED CAPTURE OF POPCORN ASH IN ECONOMIZER HOPPERS	The Babcock & Wilcox Company	11/033085	10-Jan-2005	7100521	05-Sep- 2006
SNCR DISTRIBUTION GRID	The Babcock & Wilcox Company	11/577171	12-Nov-2008	8114359	14-Feb- 2012
SOOTBLOWER FRAME ASSEMBLY	Diamond Power International, LLC	10/561569	20-Dec-2005	7832366	16-Nov- 2010
WETTED PARTICLE AND DROPLET IMPINGEMENT	The Babcock & Wilcox Company	10/948478	23-Sep-2004	7282087	16-Oct- 2007
PORT RODDER WITH VELOCITY DAMPER	Diamond Power International, LLC	11/138574	26-May-2005	7392751	01-Jul- 2008
RETRACTABLE LIQUOR GUN FOR A RECOVERY FURNACE	Diamond Power International, LLC	11/138044	26-May-2005	7475645	13-Jan- 2009

Patent Title	Owner/Current Assignee	Application Number	Application/Filir Date	ng Patent Number	Issue Date
BOILER WALL BOX COOLING SYSTEM	Diamond Power International, LLC	10/876132	24-Jun-2004	6925969	09-Aug- 2005
PASSIVE MIXING DEVICE FOR STAGED COMBUSTION OF GASEOUS BOILER FUELS	The Babcock & Wilcox Company	11/775919	11-Jul-2007	7493876	24-Feb- 2009
STEAM/WATER CONICAL CYCLONE SEPARATOR	The Babcock & Wilcox Company	11/753335	05-Jul-2007	7637699	29-Dec- 2009
LOW NOX CYCLONE FURNACE STEAM GENERATOR	The Babcock & Wilcox Company	11/720506	25-Jan-2008	7926432	19-Apr- 2011
ENHANCEMENT OF CONVENTIONAL SCR AND SNCR PROCESSES WITH AMMONIA DESTRUCTION CATALYST	The Babcock & Wilcox Company	12/098623	07-Apr-2008	7901647	08-Mar- 2011
STEAM GENERATOR TO CONTAIN AND COOL SYNTHESIS GAS	The Babcock & Wilcox Company	11/191183	27-Jul-2005	7931710	26-Apr- 2011
RECOVERY BOILER COMBUSTION AIR SYSTEM WITH INTERMEDIATE AIR PORTS VERTICALLY ALIGNED WITH MULTIPLE LEVELS OF TERTIARY AIR PORTS	The Babcock & Wilcox Company	11/694125	30-Mar-2007	8607718	17-Dec- 2013
LARGE DIAMETER MID-ZONE AIR SEPARATION CONE FOR EXPANDING IRZ	The Babcock & Wilcox Company	11/444779	01 -Jun-2006	8113824	14-Feb- 2012
CIRCULATION SYSTEM FOR SLIDING PRESSURE STEAM GENERATOR	The Babcock & Wilcox Company	11/448648	07-Jun-2006	7587996	15-Sep- 2009
LINK TYPE SEISMIC TIE FOR BOILERS	The Babcock & Wilcox Company	11743722	03-May-2007	7721680	25-May- 2010
ASSEMBLY FOR ASH SEPARATION FROM FLUE GAS	The Babcock & Wilcox Company	11/711509	27-Feb-2007	7615086	10-Nov- 2009
RADIANT SYNGAS COOLER	The Babcock &	11/588045	26-Oct-2006	7587995 <b>PATENT</b>	15-Sep-

**REEL: 069017 FRAME: 0373** 

Patent Title	Owner/Current Assignee	Application Number	Application/Filing Date	Patent Number	Issue Date
	Wilcox Company				2009
APPARATUS FOR CLEANING A SMELT SPOUT OF A COMBUSTION DEVICE (BLADERUNNER)	Diamond Power International, LLC	11/439674	24-May-2006	7735435	15-Jun- 201 0
PROCESS FOR CONTROLLING THE MOISTURE CONCENTRATION OF A COMBUSTION FLUE GAS	The Babcock & Wilcox Company	11/733942	11-Apr-2007	7585476	08-Sep- 2009
INTEGRATED FLUIDIZED BED ASH COOLER	The Babcock & Wilcox Company	11/406765	19-Apr-2006	7464669	16-Dec- 2008
END SUPPORT CONFIGURATION FOR STEAM TUBES OF A SUPERHEATER OR REHEATER	The Babcock & Wilcox Company	11/740340	26-Apr-2007	7559294	14-July- 2009
SELF SUPPORTING REINFORCED HEADER PIPE	The Babcock & Wilcox Company	11/686437	15-Mar-2007	7730908	08-Jun- 2010
MULTIPLE PASS ECONOMIZER AND METHOD FOR SCR TEMPERATURE CONTROL	The Babcock & Wilcox Company	11/542413	03-Oct-2006	7637233	29-Dec- 2009
COMPACT RADIAL PLATEN ARRANGEMENT FOR RADIANT SYNGAS COOLER	The Babcock & Wilcox Company	11/839285	15-Aug-2007	8684070	01-Apr- 2014
SEALING ARRANGEMENT WITH A SEGMENTED SEAL AND PRESSURE RELIEF	The Babcock & Wilcox Company	11/839357	15-Aug-2007	8136544	20-Mar- 2012
CATALYST PARTICULATE DIVERTER	The Babcock & Wilcox Company	11/851443	07-Sep-2007	7842251	30-Nov- 2010
EXTENDED WATER LEVEL RANGE STEAM/ WATER CONICAL CYCLONE SEPARATOR	The Babcock & Wilcox Company	11/857898	19-Sep-2007	7842113	30-Nov- 2010
BOTTOM ASH INJECTION FOR ENHANCING SPRAY DRYER ABSORBER PERFORMANCE	The Babcock & Wilcox Company	11/854781	13-Sep-2007	9192889	24-Nov- 2015
	l	<u> </u>		PATENT	

**REEL: 069017 FRAME: 0374** 

Patent Title	Owner/Current	Application	Application/Filing	Patent Number	Issue
SPRAY DRYER ABSORBER	Assignee The Babcock &	Number 11/854795	<b>Date</b> 13-Sep-2007	10208951	Date 19-Feb-
AND RELATED PROCESSES	Wilcox Company				2019
SEGREGATED IN-SITU FORCED OXIDATION WET FLUE GAS DESULFURIZATION FOR OXYGEN-FIRED FOSSIL FUEL COMBUSTION	The Babcock & Wilcox Company	12/577456	12-Oct-2009	8795416	05-Aug- 2014
METHOD AND APPARATUS FOR PREPARING PULVERIZED COAL USED TO PRODUCE SYNTHESIS GAS	The Babcock & Wilcox Company	12/060459	01-Apr-2008	8001788	23-Aug- 2011
STEAM GENERATOR ARRANGEMENT	The Babcock & Wilcox Company	12/101513	11-Apr-2008	8042497	25-Oct- 2011
TRI-SECTOR REGENERATIVE OXIDANT PREHEATER FOR OXY-FIRED PULVERIZED COAL COMBUSTION	The Babcock & Wilcox Company	12/169168	08-Jul-2008	8327809	11 -Dec- 2012
ECONOMIZER ARRANGEMENT FOR STEAM GENERATOR	BABCOCK & WILCOX POWER GENERATION GROUP, INC.	11/750271	17-May-2007	8635976	28-Jan- 2014
ECONOMIZER ARRANGEMENT FOR STEAM GENERATOR	The Babcock & Wilcox Company	14/155398	15-Jan-2014	9212816	15-Dec- 2015
RETRACTABLE ARTICULATING ROBOTIC SOOTBLOWER	Diamond Power International, LLC	12/393441	26-Feb-2009	8176883	15-May- 2012
METHOD OF FORMING, INSERTING AND PERMANENTLY BONDING RIBS IN BOILER TUBES	The Babcock & Wilcox Company	12/134295	06-Jun-2008	8350176	08-Jan- 2013
BLACK PLANT STEAM FURNACE INJECTION	The Babcock & Wilcox Company	12/175102	17-Jul-2008	8047162	01 -Nov- 2011
TUBE STUB REMOVAL APPARATUS	The Babcock & Wilcox	12/354468	15-Jan-2009	8240049	14-Aug- 2012

Patent Title	Owner/Current	Application	Application/Filing	Patent Number	Issue
	Assignee Company	Number	Date		Date
	Company				
OXY-COMBUSTION COAL FIRED BOILER AND METHOD	The Babcock & Wilcox	12/422685	13-Apr-2009	8453585	04-Jun- 2013
OF TRANSITIONING BETWEEN	Company				2013
AIR AND OXYGEN FIRING	Company				
WET SCRUBBER TRAY	The Babcock &	12/484187	13-Jun-2009	8413967	09-Apr-
	Wilcox Company				2013
WET SCRUBBER TRAY	The Babcock &	13/797003	12-Mar-2013	8777190	15-Jul-
	Wilcox Company				2014
ACCESS DOOR WITH INSIDE LATCH RELEASE	The Babcock & Wilcox	12/357743	22-Jan-2009	8136851	20-Mar- 2012
E. IT OH REBELIGE	Company				2012
SHOP-ASSEMBLED SOLAR	The Babcock &	12/605241	23-Oct-2009	9194609	24-Nov-
RECEIVER HEAT EXCHANGER	Wilcox Company				2015
BLADED BULLET COAL	The Babcock &	12/614480	09-Nov-2009	8991323	31-Mar-
DIFFUSER WITH COAL LINE	Wilcox				2015
BALANCING DEVICE	Company				
PRIMARY OXIDANT FEED TO	The Babcock &	12/571187	30-Sep-2009	8561557	22-Oct-
OXY-FIRED CIRCULATING FLUIDIZED BED (CFB)	Wilcox Company				2013
TECHNIELD DED (CLD)	Company				
SYSTEM AND METHOD FOR	The Babcock &	12/691527	21-Jan-2010	8716169	06-May-
PROTECTION OF SCR CATALYST AND CONTROL OF	Wilcox Company				2014
MULTIPLE EMISSIONS	Company				
SYSTEM AND METHOD FOR	The Babcock &	14/246380	07-Apr-2014	9874350	23-Jan-
PROTECTION OF SCR	Wilcox				2018
CATALYST AND CONTROL OF MULTIPLE EMISSIONS	Company				
INTEGRATED SPLIT STREAM WATER COIL AIRHEATER &	The Babcock & Wilcox	12/581637	16-Oct-2009	8286595	16-Oct- 2012
ECONOMIZER (IWE)	Company				2012
SOOTBLOWER WITH	Diamond Power	12/642210	18-Dec-2009	7865996	11-Jan-
PROGRESSIVE CLEANING ARC	International,				2011
	Inc.				
CHEMICAL SOLVENTS FOR	The Babcock &	13/069204	22-Mar-2011	8795618	05-Aug-
THE REMOVAL OF CARBON	Wilcox				

Patent Title	Owner/Current Assignee	Application Number	Application/Filin Date	g Patent Number	Issue Date
DIOXIDE FROM FLUE GASES	Company				2014
HYBRID WATER TREATMENT FOR HIGH TEMPERATURE STEAM GENERATORS	The Babcock & Wilcox Company	12/725777	17-Mar-2010	8277726	02-Oct- 2012
METHOD AND SYSTEM FOR IMPROVED RAPPER CONTROL	The Babcock & Wilcox Company	09/900082	06-Jul-2001	6540812	01-Apr- 2003
AN APPARATUS AND METHOD FOR FILTERING VOLTAGE FOR AN ELECTROSTATIC PRECIPATOR	The Babcock & Wilcox Company	10/063099	19-Mar-2002	6611440	26-Aug- 2003
AN ELECTROSTATIC PRECIPITATOR HAVING A SPARK CURRENT LIMITING RESISTORS AND METHOD FOR LIMITING SPARKING	The Babcock & Wilcox Company	11/679513	27-Feb-2007	7704302	27-Apr- 2010
AN ELECTROSTATIC PRECIPITATOR HAVING A SPARK CURRENT LIMITING RESISTORS AND METHOD FOR LIMITING SPARKING	The Babcock & Wilcox Company	12/760820	15-Apr-2010	8007566	30-Aug- 2011
SYSTEMS AND METHODS FOR MONITORING A RAPPING PROCESS	The Babcock & Wilcox Company	12/203713	03-Sep-2008	8404020	26-Mar- 2013
COLLECTING PLATE CLEANING USING A RESONANT FREQUENCY WAVE APPLICATION	The Babcock & Wilcox Company	12/640253	17-Dec-2009	8328907	11-Dec- 2012
SYSTEM AND METHOD FOR PROTECTION OF SCR CATALYST AND CONTROL OF MULTIPLE EMISSIONS	The Babcock & Wilcox Company	12/909753	21-Oct-2010	8303919	06-Nov- 2012
CATALYSTS POSSESSING AN IMPROVED RESISTANCE TO POISONING	The Babcock & Wilcox Company	13/190105	25-Jul-2011	9242211	26-Jan- 2016
FURNACE COOLING BY STEAM AND AIR INJECTION	The Babcock & Wilcox Company	15/057345	01-Mar-2016	9989244	05-Jun- 2018
ADVANCED ULTRA SUPERCRITICAL STEAM	The Babcock & Wilcox	14/044900	03-Oct-2013	9874346 <b>PATENT</b>	23-Jan-

REEL: 069017 FRAME: 0377

Patent Title	Owner/Current Assignee	Application Number	Application/Filing Date	Patent Number	Issue Date
GENERATOR	Company	114444	Date		2018
SYSTEM AND METHOD FOR INCREASING THE SERVICE LIFE AND/OR CATALYTIC ACTIVITY OF AN SCR CATALYST AND CONTROL OF MULTIPLE EMISSIONS	The Babcock & Wilcox Company	13/117332	27-May-2011	8691719	08-Apr- 2014
DRY SORBENT INJECTION DURING NON-STEADY STATE CONDITIONS IN DRY SCRUBBER	The Babcock & Wilcox Company	13/548150	12-Jul-2012	8821823	02-Sep- 2014
CHEMICAL LOOPING PROCESSES FOR PARTIAL OXIDATION OF CARBONACEOUS FUELS	The Babcock & Wilcox Company	13/835676	15-Mar-2013	9481837	01-Nov- 2016
REMOTE SUBMERGED CHAIN CONVEYOR	Diamond Power International, LLC	14/776800	15-Sep-2015	9345992	24-May- 2016
FLUIDIZING NOZZLE OR BUBBLE CAP ASSEMBLY FOR AIR DISTRIBUTION GRID	The Babcock & Wilcox Company	14/272113	07-May-2014	9327250	03-May- 2016
SYSTEM AND METHOD FOR INCREASING THE SERVICE LIFE AND/OR CATALYTIC ACTIVITY OF AN SCR CATALYST AND CONTROL OF MULTIPLE EMISSIONS	The Babcock & Wilcox Company	13/769686	18-Feb-2013	10213738	26-Feb- 2019
BURNER WITH FLAME STABILIZING/CENTER AIR JET DEVICE FOR LOW QUALITY FUEL	The Babcock & Wilcox Company	13/926488	25-Jun-2013	9377191	28-Jun- 2016
SYSTEM AND METHOD FOR REDUCING LIQUID DISCHARGE FROM ONE OR MORE DEVICES	Jhe Babcock & Wilcox Company GEA Process Engineering A/S	15/313222	22-Nov-2016	10589226	17-Mar- 2020
WATER JACKET FOR SOLID PARTICLE SOLAR RECEIVER	The Babcock & Wilcox Company	14/712160	14-May-2015	9920955	20-Mar- 2018
PIPE ASSEMBLY	Diamond Power International,	11/912720	28-Mar-2008	8671890	18-Mar-

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Patent Title	Owner/Current	Application	Application/Filing	Patent Number	Issue
	Assignee	Number	Date		Date
	LLC				2014
			15.1.001	0.4.500.00	0.1.0
POWER GENERATION PLANT	The Babcock &	14/333940	17-Jul-2014	9458838	04-Oct-
INTEGRATING	Wilcox				2016
CONCENTRATED SOLAR	Company				
POWER RECEIVER AND					
PRESSURIZED HEAT					
EXCHANGER					
SOLIDS-BASED	The Babcock &	14/507103	06-Oct-2014	9939178	10-Apr-
CONCENTRATED SOLAR	Wilcox				2018
POWER RECEIVER	Company				
SIMPLIFIED SUBMERGED	The Babcock &	15/490240	18-Apr-2017	10124968	13-Nov-
CHAIN CONVEYOR FOR	Wilcox				2018
BOTTOM ASH CONVERSIONS	Company				
METAL CAPTURE IN A FLUE	The Babcock &	15/653696	19-Jul-2017	10478775	19-Nov-
GAS USING SORBENT	Wilcox				2019
INJECTION	Company				
AID COOLED COMPENSED	TI D 1 1 0			11020100000000	DUD
AIR COOLED CONDENSER	The Babcock & Wilcox			US20190072333	PUB DATE:
(ACC) WIND MITIGATION SYSTEM	Company	16/116272	29-Aug-2018		07-Mar-
SISIEM	Company	10/1102/2	27-Aug-2010		2019
					2017
SPRAY DRYER ABSORBER	The Babcock &	11/854795	09/13/2007	10208951	19-Feb-
AND RELATED PROCESSES	Wilcox				2019
	Company				
SYSTEM AND METHOD FOR	The Babcock &	13/962761	08-Aug-2013	10471384	12-Nov-
REDUCING HALOGEN LEVELS	Wilcox				2019
NECESSARY FOR MERCURY	Company				
CONTROL, INCREASING THE SERVICE LIFE AND/OR					
CATALYTIC ACTIVITY OF AN					
SCR CATALYST AND/OR					
CONTROL OF MULTIPLE					
EMISSIONS					
SMALL SUPERCRITICAL	The Babcock &	13/826071	2013-03-14	10215399	26-Feb-
ONCE-THRU STEAM	Wilcox				2019
GENERATOR	Company				
SYNGAS PRODUCTION VIA	The Babcock &	15/868466	2018-01-11	US20180134553A1	2018-05-
CYCLIC REDUCTION AND	Wilcox				17
OXIDATION OF METAL	Company				
OXIDES					
SYSTEM AND METHOD FOR	The Babcock &	11/321832	2005-12-29	7452403	2008-11-
APPLYING PARTIAL	Wilcox				18
DISCHARGE ANALYSIS FOR	Company				
ELECTROSTATIC					

Patent Title	Owner/Current	Application	Application/Filing	Patent Number	Issue
	Assignee	Number	Date		Date
PRECIPITATOR					
METHOD OF	The Babcock &	11/749967	2007-05-17	8056229	2011-11-
MANUFACTURING A	Wilcox				15
TUBULAR SUPPORT	Company				
STRUCTURE					
ELECTRIC HYDRAULIC	The Babcock &	14/506923	2014-10-06	9896308	2018-02-
CATALYST LOADING AND	Wilcox				20
UNLOADING DEVICE AND	Company				
METHODS THEREFOR					
CONDENSATE REMOVAL	Diamond Power	14/820150	2015-08-06	10018431	2018-07-
SOOTBLOWER NOZZLE	International,				10
	LLC				
REMOTE SUBMERGED CHAIN	Diamond Power	14/826806	2015-08-14	9802140	2017-10-
CONVEYOR	International,				31
	LLC				
SHAFT-TO-ROLLER	Diamond Power	13/275826	2011-10-18	9375718	2016-06-
ATTACHMENT FOR CLINKER	International,				28
GRINDER ROLLER	Inc.				
PNEUMATIC TRANSPORT	Diamond Power	13/741798	2013-01-15	8915679	2014-12-
WITH MULTI VESSEL	International,				23
DISCHARGE	Inc.				
ASSEMBLY AND METHOD	Diamond Power	11/153671	2005-06-15	7637002	2009-12-
FOR REMOVING A DEVICE	International,				29
FROM A BOILER	LLC				
NATURAL CIRCULATION	The Babcock &	16/779750	03-Feb-2020	US20200256556	PUB
MULTI-CIRCULATION	Wilcox	10,77,3700	00 100 2020	0.02020020000	DATE:
PACKAGE BOILER FOR STEAM	Company				13-Aug-
ASSISTED GRAVITY	Company				2020
DRAINAGE (SAGD) PROCESS					
SELECTIVE NON-CATALYTIC	The Babcock &	16/410315	13-May-2019	10653996	19-May-
REDUCTION (SNCR) OF NOX IN	Wilcox	10,110312	10 1144, 2015	10000000	2020
FLUIDIZED BED COMBUSTION	Company				2020
REACTORS	Company				
PERTURBING AIR COOLED	The Babcock &	16/850673	16-Apr-2020	US20200333077	PUB
CONDENSER FIN	Wilcox	10/830073	10-Api-2020	0320200333077	DATE:
CONDENSERTIN	Company				22-Oct-
	Company				2020
NATURAL CIRCULATION	The Babcock &	16/445721	19-Jun-2019	US20200400305	PUB
	Wilcox	10/443/21	19-Juil-2019	0.520200400303	
MULTI-CIRCULATION  DACKAGE BOILER WITH	1				DATE: 24-Dec-
PACKAGE BOILER WITH	Company				1
SUPERHEAT FOR STEAM					2020
ASSISTED GRAVITY					
DRAINAGE (SAGD) PROCESS					
INCLUDING SUPERHEATER					
SIMPLIFIED CHAIN	The Babcock &	PCT	01-Jul-2020		07-Jan-
CONVEYOR FOR BOTTOM	Wilcox	US20/040441		US2021003231	2021

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	Assignee	Number	Date		Date
ASH CONVERSION	Company				
SMELT SPOUT CLEANING	The Babcock &	17/332894	27-May-2021		
ASSEMBLY AND PROCESS	Wilcox				
	Company				
SYNGAS PRODUCTION VIA	The Babcock &	14/799559	14-Jul-2015	9902615	27-Feb-
CYCLIC REDUCTION AND	Wilcox				2018
OXIDATION METAL OXIDES	Company				
APPARATUS FOR ENCLOSING	The Babcock &	63/145601	04-Feb-2021		
A CHEMICAL LOOPING	Wilcox				
PROCESS	Company				
SMELT SHATTERING METHOD	The Babcock &	63/076665	10-Sep-2020		
AND APPARATUS	Wilcox				
	Company				
HORIZONTAL SPIRAL TUBE	The Babcock &	10/320342	16-Dec-2002	6718915	13-Apr-
BOILER CONVECTION PASS	Wilcox				2004
ENCLOSURE DESIGN	Company				
BURNER WITH CENTER AIR	The Babcock &	11/171027	30-Jun-2005	7430970	07-Oct-
JET	Wilcox				2008
	Company				
CONTOURED FLAT STUD AND	The Babcock &	12/175524	18-Jul-2008	8522729	03-Sep-
STUD ARRANGEMENT FOR	Wilcox				2013
CYCLONE SLAG TAPS	Company				
SYSTEM AND METHOD FOR	The Babcock &	12/689313	19-Jan-2010	9221009	2015-12-
SOFTENING WATER FOR USE	Wilcox				29
IN A SCRUBBER	Company				
OXY-FUEL COMBUSTION	The Babcock &	12/712268	25-Feb-2010	8807991	19-Aug-
OXIDANT HEATER INTERNAL	Wilcox				2014
ARRANGEMENT	Company				
REDOX METHOD FOR	THE	12/837131	15-Jul-2010	8092766	10-Jan-
CAPTURE OF TOTAL	BABCOCK &				2012
GASEOUS MERCURY BY WET	WILCOX				
FGD	COMPANY				
INTEGRATED FLUE GAS	THE	12/830850	06-Jul-2010	7993615	09-Aug-
DEHUMIDIFICATION AND	BABCOCK &				2011
WET COOLING TOWER	WILCOX				
SYSTEM	COMPANY				
HIGH EFFICIENCY SOLAR	The Babcock &	13/678320	15-Nov-2012	9127857	2015-09-
RECEIVER	Wilcox				08
	Company				
FREEZE PROTECTION SYSTEM	The Babcock &	13/677499	15-Nov-2012	9273884	2016-03-
FOR SOLAR RECEIVER	Wilcox				01
	Company				
DRY SORBENT INJECTION	The Babcock &	13/548147	12-Jul-2012	8828340	09-Sep-
DURING STEADY-STATE	Wilcox				2014
CONDITIONS IN DRY	Company				
SCRUBBER	- ·				
SHOP ASSEMBLED VERTICAL	The Babcock &	13/560347	27-Jul-2012	9366458	2016-06-
SERPENTINE FLOW MOLTEN	Wilcox				14
SALT SOLAR RECEIVER	Company				
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Patent Title	Owner/Current	Application	Application/Filing	Patent Number	Issue
	Assignee	Number	Date		Date
SPLIT PASS ECONOMIZER	The Babcock &	13/754030	30-Jan-2013	10197267	2019-02-
BANK WITH INTEGRATED	Wilcox				05
WATER COIL AIR HEATING	Company				
AND FEEDWATER BIASING					
METHOD FOR CONTROLLING	The Babcock &	13/929971	28-Jun-2013	8802043	12-Aug-
ACIDIC COMPOUNDS	Wilcox				2014
PRODUCED FOR OXY-	Company				
COMBUSTION PROCESSES					
SYSTEM AND METHOD FOR	The Babcock &	13/837221	15-Mar-2013	10018356	2018-07-
CONTROLLING ONE OR MORE	Wilcox				10
PROCESS PARAMETERS	Company				
ASSOCIATED WITH A					
COMBUSTION PROCESS					
CIRCULATING DRY	The Babcock &	13/895642	16-May-2013	8715600	06-May-
SCRUBBER	Wilcox				2014
	Company				
SYSTEM FOR PRODUCING	The Babcock &	14/298381	06-Jun-2014	9933154	2018-04-
HIGH PRESSURE STEAM FROM	Wilcox				03
LOW QUALITY WATER	Company				
INTEGRATED SORBENT	THE	14/336645	21-Jul-2014	9192890	2015-11-
INJECTION AND FLUE GAS	BABCOCK &				24
DESULFURIZATION SYSTEM	WILCOX				
	COMPANY				
SOLIDS TRANSPORT IN FLUE	THE	14/219586	19-Mar-2014	9097158	2015-08-
GAS	BABCOCK &				04
DESULFURIZATIONSYSTEM	WILCOX				
	COMPANY				
Method and apparatus for removing	The Babcock &	15040345	2016-02-10	10471386	2019-11-
mercury from a flue gas stream	Wilcox				12
	Company				
High temperature sub-critical boiler	The Babcock &	15091236	2016-04-05	10429062	2019-10-
with steam cooled upper furnace	Wilcox				01
	Company				
Material handling system for fluids	The Babcock &	15601099	2017-05-22	10429061	2019-10-
3.3,	Wilcox				01
	Company				
Methods of generating energy from	The Babcock &	15601230	2017-05-22	10415825	2019-09-
cellulosic biofuel waste	Wilcox				17
	Company				
Transition casting for boiler with	The Babcock &	15099192	2016-04-14	10253972	2019-04-
steam cooled upper furnace	Wilcox	15033132	2010 0.11	10200372	09
steam coolea apper rannace	Company				
Transition casting for boiler with	The Babcock &	15091173	2016-04-05	10234169	2019-03-
steam cooled upper furnace	Wilcox	13031173		1525 1107	19
and a corea apper rannae	Company				
System and method for softening	The Babcock &	14926431	2015-10-29	10144661	2018-12-
water for use in a scrubber	Wilcox	11020731	2010 10 27	10111001	04
mater for use in a seruotei	Company				
Modular molten salt solar towers	The Babcock &	14875122	2015-10-05	10113536	2018-10-
iviodulai monen san sonai towers	THE DAUGUER &	170/3122	2013-10-03	10113330	2010-10-

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with thermal storage for process or	Wilcox		1 <del>.</del>		30
power generation or cogeneration	Company				
Fabric filter louver assembly	The Babcock &	15053209	2016-02-25	9901856	2018-02-
·	Wilcox				27
	Company				
System and method for reducing	The Babcock &	15575479	2017-11-20	10987626	2021-04-
liquid discharge from one or more	Wilcox				27
devices	Company				
High temperature sub-critical boiler	The Babcock &	15091221	2016-04-05	10415819	2019-09-
with common steam cooled wall	Wilcox				17
between furnace and convection	Company				
pass					

**RECORDED: 09/13/2024**