

TRADEMARK ASSIGNMENT

Electronic Version v1.1  
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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT		
<b>NATURE OF CONVEYANCE:</b>	ASSIGNS THE ENTIRE INTEREST AND THE GOODWILL		
<b>CONVEYING PARTY DATA</b>			
<b>Name</b>	<b>Formerly</b>	<b>Execution Date</b>	<b>Entity Type</b>
ConocoPhillips Company		05/24/2011	COMPANY:
<b>RECEIVING PARTY DATA</b>			
<b>Name:</b>	Bechtel Hydrocarbon Technology Solutions, Inc.		
<b>Street Address:</b>	3000 Post Oak Blvd.		
<b>Internal Address:</b>	Mail Stop 13		
<b>City:</b>	Houston		
<b>State/Country:</b>	TEXAS		
<b>Postal Code:</b>	77056		
<b>Entity Type:</b>	CORPORATION: DELAWARE		
<b>PROPERTY NUMBERS Total: 1</b>			
<b>Property Type</b>	<b>Number</b>	<b>Word Mark</b>	
<b>Registration Number:</b>	2899719	THRUPLUS	
<b>CORRESPONDENCE DATA</b>			
<b>Fax Number:</b>	(713)658-1921		
<b>Phone:</b>	7136582323		
<b>Email:</b>	jharris@craincaton.com		
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>			
<b>Correspondent Name:</b>	Crain Caton & James		
<b>Address Line 1:</b>	1401 McKinney, Suite 1700		
<b>Address Line 2:</b>	Attn: W. P. Jensen		
<b>Address Line 4:</b>	Houston, TEXAS 77010		
<b>ATTORNEY DOCKET NUMBER:</b>	8643-90		
<b>NAME OF SUBMITTER:</b>	William P. Jensen		
<b>Signature:</b>	/William P. Jensen/		

CH \$40.00 2899719

Date:

02/27/2012

**Total Attachments: 31**

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## INTELLECTUAL PROPERTY ASSIGNMENT

This INTELLECTUAL PROPERTY ASSIGNMENT ("Assignment") is made and entered into as of June 24, 2011, between ConocoPhillips Company ("Seller") and Bechtel Hydrocarbon Technology Solutions, Inc. ("Buyer"). This Assignment is made pursuant to that certain Asset Purchase Agreement dated as of May 24, 2011 (the "Asset Purchase Agreement") between Seller and Buyer.

NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Seller hereby irrevocably sells, conveys, transfers and assigns to the Buyer, and the Buyer hereby accepts the sale, conveyance, transfer, and assignment from the Seller, of all of the Seller's worldwide right, title and interest in and to all of the Seller's Intellectual Property identified in Schedule A, which is incorporated by reference herein, together with the goodwill associated therewith and which is symbolized thereby, including the right to sue and recover damages for infringement, misappropriation, or other claims and rights relating to or under any of the above, whether arising prior to or subsequent to the date of this Assignment, in both domestic and foreign jurisdictions. This Assignment includes any and all associated registrations and applications with respect thereto, and any and all renewals and extensions thereof, that may hereafter be secured under the laws now or hereafter in effect in the United States of America and in any other jurisdiction, the same to be held and enjoyed by Buyer from and after the date hereof as fully and entirely as the same would have been held and enjoyed by Seller had this Assignment not been made. Seller hereby agrees to execute any documents and/or instruments as Buyer may reasonably request in order to more effectively assign, transfer, grant, convey, assure and confirm to Buyer, or to aid and assist in the collection of or reducing to Buyer's possession, all of such Intellectual Property, and covenants that Seller will do all things necessary to give full effect to this Assignment, including obtaining and executing any written agreements and other instruments to enable Buyer to record and enforce this Assignment.

This Assignment is subject to all of the terms, conditions and limitations set forth in the Purchase Agreement (including, but not limited to, the representations, warranties, covenants and indemnities set forth in the Purchase Agreement). In the event of any conflict or inconsistency between the terms of this Assignment and terms of the Purchase Agreement, the terms of the Purchase Agreement will prevail. Nothing contained herein will be deemed to alter, modify, expand or diminish the terms of the Purchase Agreement.

This Assignment and the transactions contemplated hereby will be governed by and construed in accordance with the laws of the State of New York, without giving effect to any law or rule that would cause the laws of any jurisdiction other than the State of New York to be applied.

This Assignment may be executed in one or more counterparts, and by the different parties hereto in separate counterparts, each of which shall be deemed to be an original but all of which taken together shall constitute one and the same agreement.

WHEREFORE, the parties have caused their authorized representatives to execute and deliver this Agreement as of the date first written above.

BECHTEL HYDROCARBON TECHNOLOGY  
SOLUTIONS, INC.

CONOCOPHILLIPS COMPANY

By: 

Print

Name: Scott Johnson

Print

Title: Senior Vice President

By: 

Print

Name: Rex W. Bennett, Jr.

Print

Title: Vice President

TRADEMARK

REEL: 004724 FRAME: 0646

**SCHEDULE A**

**INTELLECTUAL PROPERTY**

**PATENTS:**

Docket Number	Country	Status	Filing Type	Application Date	Application Number	Grant Date	Patent Number	Title
CO95/014	US	Granted	National	1/5/1996	08/583576	7/8/1997	5645711	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	AU	Granted	National	10/29/1996	2081897	10/14/1999	707147	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	BR	Granted	National	10/29/1996	P19607814-6	10/26/2004	P19607814-6	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	CA	Granted	National	10/29/1996	2213990	10/12/2004	2213990	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	CN	Granted	National	10/29/1996	96193485.9	9/4/2002	96193485.9	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	FI	Granted	PCT/EPC Application	10/29/1996	96937443.8	8/8/2007	EP0871687	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	FR	Granted	PCT/EPC Application	10/29/1996	96937443.8	8/8/2007	EP0871687	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	GB	Granted	PCT/EPC Application	10/29/1996	96937443.8	8/8/2007	EP0871687	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	DE	Granted	PCT/EPC Application	10/29/1996	EP0871687	8/8/2007	69637200.2	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	IT	Granted	PCT/EPC Application	10/29/1996	96937443.8	8/8/2007	EP0871687	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER

Docket Number	Country	Status	Filing Type	Application Date	Application Number	Grant Date	Patent Number	Title
CO95/014	KR	Granted	National	10/29/1996	97-0706182	7/20/2004	442163	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	MX	Granted	National	10/29/1996	97/6742	10/2/2000	198893	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	NO	Filed	National	10/29/1996	974067			PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	RU	Granted	National	10/29/1996	97116516	9/10/2002	2201954	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	ES	Granted	PCT/EPC Application	10/29/1996	96937443.8	8/8/2007	EP0871687	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	UA	Granted	Patent Cooperation Treaty	10/29/1996	97104893/M	1/18/2002	46011	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	IN	Granted	National	11/4/1996	1919/CAL/96	11/4/1996	189450	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER Changed to above at filing of Response to OA dated 03OC2002
CO95/014	ZA	Granted	National	11/7/1996	96/9357	8/27/1997	96/9357	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	VE	Granted	National	11/7/1996	1890-96	11/7/1996	58570	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	KW	Filed	National	12/23/1996	PA 158/96			PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	EG	Granted	National	12/24/1996	1176/96	5/31/2000	20893	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO95/014	MY	Granted	National	12/31/1996	P19605554	10/31/2002	MY114448-A	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER

Docket Number	Country	Status	Filing Type	Application Date	Application Number	Grant Date	Patent Number	Title
CO95/014	TW	Granted	National	1/8/1997	86100141	5/28/2001	132441	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER
CO97/004	US	Granted	National	6/20/1997	08/879573	4/6/1999	5891310	DELAYED COKING CYCLE TIME REDUCTION
CO97/008	US	Granted	National	9/8/1997	08/925229	9/8/1998	5804038	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS
CO97/012	US	Granted	National	5/15/1998	09/079889	2/13/2001	6187147	IMPROVED DELAYED COKER UNIT FURNACE
CO97/004	BR	Granted	Patent Cooperation Treaty	6/11/1998	P1 9808075-0	12/30/2008	P1 9808075-0	DELAYED COKING CYCLE TIME REDUCTION
CO97/004	CA	Granted	Patent Cooperation Treaty	6/11/1998	2282475	6/14/2005	2282475	DELAYED COKING CYCLE TIME REDUCTION
CO97/004	CN	Granted	Patent Cooperation Treaty	6/11/1998	98804337.8	5/12/2004	98804337.8	DELAYED COKING CYCLE TIME REDUCTION
CO97/004	EP	Granted	PCT/EPC Application	6/11/1998	98929038.2	9/14/2005	EP0991735	DELAYED COKING CYCLE TIME REDUCTION
CO97/004	FI	Granted	European Patent Case	6/11/1998	98929038.2	9/14/2005	EP0991735	DELAYED COKING CYCLE TIME REDUCTION
CO97/004	KR	Granted	Patent Cooperation Treaty	6/11/1998	99-7008454	6/9/2004	436614	DELAYED COKING CYCLE TIME REDUCTION
CO97/004	MX	Granted	Patent Cooperation Treaty	6/11/1998	99/9434	2/7/2002	206498	DELAYED COKING CYCLE TIME REDUCTION
CO97/004	RU	Granted	Patent Cooperation Treaty	6/11/1998	2000101284	4/29/2002	2192445	DELAYED COKING CYCLE TIME REDUCTION
CO97/004	ES	Granted	European Patent Case	6/11/1998	EP0991735	9/14/2005	2245033 T3	DELAYED COKING CYCLE TIME REDUCTION
CO97/008	BR	Granted	Patent Cooperation Treaty	6/11/1998	P19807956-5	3/23/2010	P1 9807956-5	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS
CO97/008	CA	Granted	Patent Cooperation Treaty	6/11/1998	2283342	3/25/2003	2283342	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS
CO97/008	CN	Granted	Patent Cooperation Treaty	6/11/1998	98805659.3	3/31/2004	98805659.3	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS
CO97/008	JP	Granted	Patent Cooperation Treaty	6/11/1998	1999-515495	3/6/2009	4270586	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS
CO97/008	MX	Granted	Patent Cooperation Treaty	6/11/1998	99/10490	2/7/2002	206499	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS

Docket Number	Country	Status	Filing Type	Application Date	Application Number	Grant Date	Patent Number	Title
CO97/008	RU	Granted	Patent Cooperation Treaty	6/11/1998	2060108466	3/28/2002	2189383	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS
CO97/008	ES	Granted	PCT/EPC Application	6/11/1998	98931282.2	9/15/2004	EPI017759	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS
CO97/004	IN	Granted	National	6/17/1998	1076/CAL/98	11/3/2005	195446	DELAYED COKING CYCLE TIME REDUCTION
CO97/008	IN	Granted	National	6/17/1998	1077/CAL/98	12/16/2005	195768	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS
CO97/004	VE	Filed	National	6/18/1998	1998-001334			DELAYED COKING CYCLE TIME REDUCTION
CO97/008	MY	Granted	National	8/28/1998	P198003968	6/30/2006	MY-123894-A	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS
CO97/012	TW	Granted	National	12/21/1998	87121342	9/21/2002	163105	IMPROVED DELAYED COKER UNIT FURNACE
CO97/012	ZA	Granted	National	12/28/1998	98/11866	9/29/1999	98/11866	IMPROVED DELAYED COKER UNIT FURNACE
CO97/012	CA	Granted	Patent Cooperation Treaty	4/1/1999	2328475	12/30/2008	2328475	IMPROVED DELAYED COKER UNIT FURNACE
CO97/012	CN	Granted	Patent Cooperation Treaty	4/1/1999	99805940.4	4/27/2005	99805940.4	IMPROVED DELAYED COKER UNIT FURNACE
CO97/012	GB	Granted	PCT/EPC Application	4/1/1999	99916341.3	10/6/2004	EP1093505	IMPROVED DELAYED COKER UNIT FURNACE
CO97/012	DE	Granted	PCT/EPC Application	4/1/1999	EP1093505	10/6/2004	69920911.0	IMPROVED DELAYED COKER UNIT FURNACE
CO97/012	IN	Filed	National	4/1/1999	IN/PCT/2000/00444			IMPROVED DELAYED COKER UNIT FURNACE
CO97/012	IT	Granted	PCT/EPC Application	4/1/1999	99916341.3	10/6/2004	EP1093505	IMPROVED DELAYED COKER UNIT FURNACE
CO97/012	JP	Granted	National	4/1/1999	2000-549684	7/11/2008	4152592	IMPROVED DELAYED COKER UNIT FURNACE
CO97/012	MX	Granted	National	4/1/1999	01/0729	8/13/2004	222136	IMPROVED DELAYED COKER UNIT FURNACE
CO97/012	NO	Granted	National	4/1/1999	2080 5759	2/21/2011	330114	IMPROVED DELAYED COKER UNIT FURNACE
CO97/012	ES	Granted	PCT/EPC Application	4/1/1999	99916341.3	10/6/2004	EP1093505	IMPROVED DELAYED COKER UNIT FURNACE
CO97/012	UA	Granted	Patent Cooperation Treaty	4/1/1999	2000127186/M	4/7/2003	57616	IMPROVED DELAYED COKER UNIT FURNACE



Docket Number	Country	Status	Filing Type	Application Date	Application Number	Grant Date	Patent Number	Title
COP-09647.0-01	CA	Granted	Patent Cooperation Treaty	8/31/1999	2341710	12/9/2003	2341710	COKE DRUM SEMI AUTOMATIC TOP DEHEADER
COP-09647.0-01	CN	Granted	Patent Cooperation Treaty	8/31/1999	99812811.2	4/22/2005	99812811.2	COKE DRUM SEMI AUTOMATIC TOP DEHEADER
COP-09647.0-01	EP	Granted	PCT/EPC Application	8/31/1999	99968246.1	3/12/2008	EP1114120	COKE DRUM SEMI AUTOMATIC TOP DEHEADER
COP-09647.0-01	FR	Granted	European Patent Case	8/31/1999	99968246.1	3/12/2008	EP1114120	COKE DRUM SEMI AUTOMATIC TOP DEHEADER
COP-09647.0-01	GB	Granted	European Patent Case	8/31/1999	99968246.1	3/12/2008	EP1114120	COKE DRUM SEMI AUTOMATIC TOP DEHEADER
COP-09647.0-01	DE	Granted	European Patent Case	8/31/1999	99968246.1	3/12/2008	69938349.8	COKE DRUM SEMI AUTOMATIC TOP DEHEADER
COP-09647.0-01	IN	Granted	National	8/31/1999	IN/PCT/2001/00227KOL	7/26/2007	208401	COKE DRUM SEMI AUTOMATIC TOP DEHEADER
COP-09647.0-01	IT	Granted	European Patent Case	8/31/1999	99968246.1	3/12/2008	EP1114120	COKE DRUM SEMI AUTOMATIC TOP DEHEADER
COP-09647.0-01	JP	Granted	National	8/31/1999	567646/00	10/16/2009	4392128	COKE DRUM SEMI-AUTOMATIC TOP DEHEADER
COP-09647.0-01	MX	Granted	National	8/31/1999	01/2181	2/1/2005	225961	COKE DRUM SEMI AUTOMATIC TOP DEHEADER
COP-09647.0-01	NO	Granted	National	8/31/1999	20010983	5/18/2010	328813	COKE DRUM SEMI AUTOMATIC TOP DEHEADER
COP-09647.0-01	ES	Granted	European Patent Case	8/31/1999	99968246.1	3/12/2008	EP1114120	COKE DRUM SEMI AUTOMATIC TOP DEHEADER
COP-09647.0-01	UA	Granted	Patent Cooperation Treaty	8/31/1999	2001031993	12/16/2002	51846	AN APPARATUS AND METHOD FOR REMOTELY OPERATING A VESSEL COVER EXCHANGE ASSEMBLY Title changed to above upon Decision to Grant 30SE2002
COP-09647.0-01	US	Granted	National	8/31/1999	09/387030	5/8/2001	6228225	COKE DRUM SEMI AUTOMATIC TOP DEHEADER
TOSCOLA006A	US	Granted	National	4/25/2001	09/841979	10/26/2004	6808602	COKE DRUM BOTTOM HEAD REMOVAL SYSTEM
CO97/026	US	Granted	National	6/1/2001	09/872390	2/8/2005	6852294	ALTERNATE COKE FURNACE TUBE ARRANGEMENT

Docket Number	Country	Status	Filing Type	Application Date	Application Number	Grant Date	Patent Number	Title
CO99/044	US	Granted	National	4/11/2002	10/121897	7/19/2005	6919017	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)
CO99/044	EG	Granted	National	4/9/2003	333/03	8/22/2005	23435	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)
CO99/044	TH	Filed	National	4/9/2003	081620			SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)
CO99/044	AM	Granted	PCT/Eurasian Patent Convention	4/10/2003	200401351	10/27/2005	006143	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)

Docket Number	Country	Status	Filing Type	Application Date	Application Number	Grant Date	Patent Number	Title
CO99/044	AZ	Granted	PCT/Eurasian Patent Convention	4/10/2003	200401351	10/27/2005	006143	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)
CO99/044	BR	Filed	Patent Cooperation Treaty	4/10/2003	P10308822-7			SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL
CO99/044	CA	Granted	Patent Cooperation Treaty	4/10/2003	2479092	4/20/2010	2479092	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL
CO99/044	CL	Filed	National	4/10/2003	736/03			SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)
CO99/044	CN	Granted	Patent Cooperation Treaty	4/10/2003	03807989.5	7/26/2006	03807989.5	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)
CO99/044	EA	Granted	PCT/Eurasian Patent Convention	4/10/2003	200401351	10/27/2005	006143	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)

Docket Number	Country	Status	Filing Type	Application Date	Application Number	Grant Date	Patent Number	Title
CO99/044	IN	Filed	Patent Cooperation Treaty	4/10/2003	2656/DELNP/2004			DELAYED COKING PROCESS
CO99/044	ID	Filed	Patent Cooperation Treaty	4/10/2003	W-200402204			SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE
CO99/044	JP	Granted	Patent Cooperation Treaty	4/10/2003	2003-584211	12/4/2009	4417726	MATERIAL FROM FLASH ZONE GAS OIL
CO99/044	KZ	Granted	PCT/Eurasian Patent Convention	4/10/2003	200401351	10/27/2005	006143	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE
CO99/044	KR	Granted	Patent Cooperation Treaty	4/10/2003	10-2004-7015063	6/9/2010	10-0964418	MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)
CO99/044	KG	Granted	PCT/Eurasian Patent Convention	4/10/2003	200401351	10/27/2005	006143	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE
CO99/044	MY	Granted	National	4/10/2003	PI20031334	10/31/2007	MY-132765-A	FROM DELAYED COKING GAS OIL SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)
CO99/044	MX	Granted	Patent Cooperation Treaty	4/10/2003	2004/009812	12/15/2008	263129	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL

Docket Number	Country	Status	Filing Type	Application Date	Application Number	Grant Date	Patent Number	Title
CO99/044	NO	Filed	Patent Cooperation Treaty	4/10/2003	20044443	10/27/2005	006143	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL
CO99/044	RU	Granted	PCT/Eurasian Patent Convention	4/10/2003	200401351			SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)
CO99/044	ZA	Granted	Patent Cooperation Treaty	4/10/2003	7504/04	12/28/2005	20047504	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL
CO99/044	TM	Granted	PCT/Eurasian Patent Convention	4/10/2003	200401351	10/27/2005	006143	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)
CO99/044	UA	Granted	Patent Cooperation Treaty	4/10/2003	20041109197	4/25/2007	78778	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL
CO99/044	VE	Filed	National	4/10/2003	591/03			SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)

Docket Number	Country	Status	Filing Type	Application Date	Application Number	Grant Date	Patent Number	Title
CO99/044	TJ	Granted	PCT/Eurasian Patent Convention	4/10/2003	200401351	10/27/2005	006143	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)
CO99/044	AR	Granted	National	4/11/2003	P030101278	7/30/2010	AR 039407 BI	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)
CO99/044	TW	Granted	National	4/11/2003	92108393	6/21/2006	1256972	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)
CO97/026	US	Granted	National	12/8/2004	11/006878	4/28/2009	7524411	Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)
CO99/044	US	Granted	National	3/21/2005	11/086950	1/13/2009	7476295	ALTERNATE COKE FURNACE TUBE ARRANGEMENT
34173	US	Granted	National	8/29/2005	11/215006	5/19/2009	7534326	SEPARATION APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL
34173	CL	Filed	National	9/6/2005	2289-2005			COKE DRUM BOTTOM UNHEADING SYSTEM
34173	AZ	Granted	PCT/Eurasian Patent Convention	9/14/2005	200700764	8/29/2008	010340	COKE DRUM BOTTOM UNHEADING DEVICE COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD

Docket Number	Country	Status	Filing Type	Application Date	Application Number	Grant Date	Patent Number	Title
34173	BY	Granted	PCT/Eurasian Patent Convention	9/14/2005	200700764	8/29/2008	010340	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD
34173	CA	Granted	Patent Cooperation Treaty	9/14/2005	2580354	9/28/2010	2580354	COKE DRUM BOTTOM UNHEADING DEVICE
34173	CN	Granted	Patent Cooperation Treaty	9/14/2005	200580033035.4	10/27/2010	ZL 2005 8 00333035.4	COKE DRUM BOTTOM UNHEADING DEVICE
34173	EP	Filed	PCT/EPC Application	9/14/2005	05797703.5			COKE DRUM BOTTOM UNHEADING DEVICE
34173	EA	Granted	PCT/Eurasian Patent Convention	9/14/2005	200700764	8/29/2008	010340	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD
34173	JP	Granted	Patent Cooperation Treaty	9/14/2005	2007-534626	2/25/2011	4690415	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD
34173	KZ	Granted	PCT/Eurasian Patent Convention	9/14/2005	200700764	8/29/2008	010340	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD
34173	KG	Granted	PCT/Eurasian Patent Convention	9/14/2005	200700764	8/29/2008	010340	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD
34173	MX	Filed	Patent Cooperation Treaty	9/14/2005	MX/a/2007/003670			COKE DRUM BOTTOM UNHEADING DEVICE
34173	RU	Granted	PCT/Eurasian Patent Convention	9/14/2005	200700764	8/29/2008	010340	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD
34173	TM	Granted	PCT/Eurasian Patent Convention	9/14/2005	200700764	8/29/2008	010340	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD
34173	TJ	Granted	PCT/Eurasian Patent Convention	9/14/2005	200700764	8/29/2008	010340	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD
34173	TW	Filed	National	9/15/2005	094131865			COKE DRUM BOTTOM UNHEADING DEVICE
34173	MY	Filed	National	9/27/2005	P1 20054536			COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD
34173	TH	Filed	National	9/27/2005	104668			COKE DRUM BOTTOM UNHEADING DEVICE
34173	AR	Filed	National	9/28/2005	P050104090			COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD
34173	VE	Filed	National	9/29/2005	2005-601978			COKE DRUM BOTTOM UNHEADING DEVICE
34156	US	Granted	National	4/28/2008	12/110385	4/12/2011	7922896	METHOD FOR REDUCING FOULING OF COKE DRUM FURNACES
41082	US	Filed	National	4/23/2009	61/172037			EFFICIENT METHOD FOR IMPROVED COKE DRUM FURNACE OIL QUALITY

Docket Number	Country	Status	Filing Type	Application Date	Application Number	Grant Date	Patent Number	Title
41082	US	Filed	National	4/20/2010	12/763712			EFFICIENT METHOD FOR IMPROVED COKER GAS OIL QUALITY
41082	WO	Filed	Patent Cooperation Treaty	4/21/2010	PCT/US2010/31924			EFFICIENT METHOD FOR IMPROVED COKER GAS OIL QUALITY

**PENDING DOCKET ACTION LIST:**

Docket Number	Action	Action Due Date	Application Date	Application Number	Country	Title	Status	Patent Number	Next Tax Date
34173	Actual Working	8/29/2013	9/14/2005	200700764	Belarus	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	Granted	010340	09/14/2011
34173	Actual Working	8/29/2012	9/14/2005	200700764	Russian Federation	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	Granted	010340	09/14/2011
34173	Petition For Exam	8/2/2011	9/27/2005	104668	Thailand	COKE DRUM BOTTOM UNHEADING DEVICE	Filed		
41082	Request for Rectification under Rule 91	6/23/2011	4/21/2010	PCT/US2010/31924	Patent Cooperation Treaty	EFFICIENT METHOD FOR IMPROVED COKER GAS OIL QUALITY	Filed		
41082	Natl Filing to be Requested - 3 Mo Rem	7/23/2011	4/21/2010	PCT/US2010/31924	Patent Cooperation Treaty	EFFICIENT METHOD FOR IMPROVED COKER GAS OIL QUALITY	Filed		
41082	Internat'l Exam Report	8/23/2011	4/21/2010	PCT/US2010/31924	Patent Cooperation Treaty	EFFICIENT METHOD FOR IMPROVED COKER GAS OIL QUALITY	Filed		
41082	Natl Filing to be Requested - 2 Mo Rem	8/23/2011	4/21/2010	PCT/US2010/31924	Patent Cooperation Treaty	EFFICIENT METHOD FOR IMPROVED COKER GAS OIL QUALITY	Filed		
41082	Natl Filing to be Requested - 1 Mo Rem	9/23/2011	4/21/2010	PCT/US2010/31924	Patent Cooperation Treaty	EFFICIENT METHOD FOR IMPROVED COKER GAS OIL QUALITY	Filed		
41082	Natl Filing Ext.(CHAP II)	10/23/2011	4/21/2010	PCT/US2010/31924	Patent Cooperation Treaty	EFFICIENT METHOD FOR IMPROVED COKER GAS OIL QUALITY	Filed		
41082	National Phase entry - 31 months	11/23/2011	4/21/2010	PCT/US2010/31924	Patent Cooperation Treaty	EFFICIENT METHOD FOR IMPROVED COKER GAS OIL QUALITY	Filed		



Docket Number	Action	Action Due Date	Application Date	Application Number	Country	Title	Status	Patent Number	Next Tax Date
CO95/014	Actual Working	3/31/2012	11/4/1996	1919/CAL/96	India	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER Changed to above at filing of Response to OA dated 03OC2002 PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	Granted	189450	11/04/2011
CO97/004	Actual Working	3/31/2012	6/17/1998	1076/CAL/98	India	DELAYED COKING CYCLE TIME REDUCTION	Granted	195446	06/17/2012
CO97/008	Actual Working	3/31/2012	6/17/1998	1077/CAL/98	India	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	Granted	195768	06/17/2012
COP-09647.0-01	Actual Working	3/31/2012	8/31/1999	IN/PCT/2001/00227KOL	India	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	Granted	208401	08/31/2011

**ANNUITY PAYMENTS DUE THROUGH 2012:**

Docket Number	Next Tax Date	Tax Year	Projected Due	Drop Date	Expiration Date	Country	Technology Area	Title	Grant Date
CO95/014	5/27/2011	11	703	11/27/2011	1/7/2017	Taiwan	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	5/28/2001
CO97/004	6/9/2011	8	571	12/9/2011	6/11/2018	Korea South	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	6/9/2004
CO97/004	6/11/2011	14	872	12/11/2011	6/11/2018	Russian Federation	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	4/29/2002
CO97/004	6/11/2011	14	1314	3/11/2012	12/30/2018	Brazil	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	12/30/2008
CO97/004	6/11/2011	13	296	6/11/2012	6/11/2018	Canada	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	6/14/2005
CO97/004	6/11/2011	14	1006	12/11/2011	6/11/2018	China P.R.	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	5/12/2004
CO97/008	6/11/2011	14	872	12/11/2011	6/11/2018	Russian Federation	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	3/28/2002
CO97/008	6/11/2011	14	1314	3/11/2012	3/23/2020	Brazil	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	3/23/2010

Docket Number	Next Tax Date	Tax Year	Projected Due	Drop Date	Expiration Date	Country	Technology Area	Title	Grant Date
CO97/008	6/11/2011	13	296	6/11/2012	6/11/2018	Canada	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	3/25/2003
CO97/008	6/11/2011	14	1006	12/11/2011	6/11/2018	China P.R.	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	3/31/2004
CO97/004	6/17/2011	14	435	12/17/2011	6/17/2018	India	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	11/3/2005
CO97/008	6/17/2011	14	435	12/17/2011	6/17/2018	India	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	12/16/2005
CO99/044	6/20/2011	6	192.8015	12/20/2011	4/10/2023	Taiwan	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11/12/2002. APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	6/21/2006
CO97/008	6/23/2011	14	123	3/23/2012	6/23/2018	Venezuela	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	6/23/1998
CO97/004	6/30/2011	14	1563	12/30/2011	4/6/2010	Germany	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2011	14	751	12/30/2011	4/6/2010	Denmark	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2011	14	1034	12/31/2011	4/6/2010	Italy	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2011	14	1438	12/30/2011	4/6/2010	Austria	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2011	14	644	12/30/2011	4/6/2010	France	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2011	14	431	12/30/2011	4/6/2010	Great Britain	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2011	14	494	12/30/2011	4/6/2010	Sweden	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2011	14	1352	12/30/2011	4/6/2010	Netherlands	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2011	14	566	1/30/2012	6/11/2018	Spain	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2011	14	992	12/30/2011	6/11/2018	Finland	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005

Docket Number	Next Tax Date	Tax Year	Projected Due	Drop Date	Expiration Date	Country	Technology Area	Title	Grant Date
CO97/008	6/30/2011	14	1352	12/30/2011	6/11/2018	Netherlands	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	9/15/2004
CO97/008	6/30/2011	14	1034	12/31/2011	6/11/2018	Italy	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	9/15/2004
CO97/008	6/30/2011	14	644	12/30/2011	6/11/2018	France	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	9/15/2004
CO97/008	6/30/2011	14	431	12/30/2011	2/4/2011	Great Britain	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	9/15/2004
CO97/008	6/30/2011	14	1563	12/30/2011	6/11/2018	Germany	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	9/15/2004
CO97/008	6/30/2011	14	566	1/30/2012	6/11/2018	Spain	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	9/15/2004
CO97/008	6/30/2011	6	283	12/30/2011	6/30/2021	Malaysia	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	6/30/2006
CO97/012	7/11/2011	4	447	1/11/2012	4/1/2019	Japan	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	7/11/2008
CO95/014	7/20/2011	8	613	1/20/2012	10/29/2016	Korea South	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	7/20/2004
COP-09647.0-01	8/31/2011	12	296	8/31/2012	8/31/2019	Canada	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	12/9/2003
COP-09647.0-01	8/31/2011	13	1006	2/29/2012	8/31/2019	China P.R.	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	4/22/2005
COP-09647.0-01	8/31/2011	13	506	3/31/2012	8/31/2019	Spain	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	3/12/2008
COP-09647.0-01	8/31/2011	13	518	2/29/2012	8/31/2019	France	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	3/12/2008
COP-09647.0-01	8/31/2011	13	1214	2/29/2012	8/31/2019	Germany	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	3/12/2008
COP-09647.0-01	8/31/2011	13	416	2/29/2012	8/31/2019	India	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	7/26/2007
COP-09647.0-01	8/31/2011	13	770	2/29/2012	8/31/2019	Norway	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	5/18/2010
COP-09647.0-01	8/31/2011	13	515	8/31/2012	8/31/2019	Ukraine	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	12/16/2002

AN APPARATUS AND METHOD FOR REMOTELY OPERATING A VESSEL COVER EXCHANGE ASSEMBLY  
 Title changed to above upon Decision to Grant 30SE2002 COKE DRUM SEMI AUTOMATIC TOP DEHEADER

Docket Number	Next Tax Date	Tax Year	Projected Due	Drop Date	Expiration Date	Country	Technology Area	Title	Grant Date
COP-09647.0-01	8/31/2011	13	456	2/29/2012	8/31/2019	Great Britain	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	3/12/2008
COP-09647.0-01	8/31/2011	13	848	2/29/2012	8/31/2019	Italy	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	3/12/2008
CO95/014	9/7/2011	14	1069	9/7/2012	12/31/2016	Indonesia	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	9/8/2000
34173	9/14/2011	7	117	3/14/2012	9/14/2025	Armenia	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2011	7	98	3/14/2012	9/14/2025	Azerbaijan	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2011	7	296	3/14/2012	9/14/2025	Belarus	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2011	7	336	3/14/2012	9/14/2025	Kyrgyzstan	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2011	7	296	3/14/2012	9/14/2025	Kazakhstan	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2011	7	398	3/14/2012	9/14/2025	Moldova	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2011	7	240	3/14/2012	9/14/2025	Russian Federation	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2011	7	163	3/14/2012	9/14/2025	SKEL-TADJ	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2011	7	220	3/14/2012	9/14/2025	Turkmenistan	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2011	6	237	9/14/2012	9/14/2025	Canada	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING DEVICE	9/28/2010
34173	9/14/2011	7	378	3/14/2012	9/14/2025	China P.R.	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING DEVICE	10/27/2010
34173	9/14/2011	7	208	3/14/2012	9/14/2025	Eurasian Patent Convention	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
CO97/012	9/20/2011	10	693	3/20/2012	12/20/2018	Taiwan	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	9/21/2002
34173	9/30/2011	7	1645	3/30/2012		European Patent Convention	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING DEVICE	
CO95/014	10/29/2011	16	1079	4/29/2012	10/29/2016	Russian Federation	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	9/10/2002

Docket Number	Next Tax Date	Tax Year	Projected Due	Drop Date	Expiration Date	Country	Technology Area	Title	Grant Date
CO95/014	10/29/2011	16	831	10/29/2012	10/29/2016	Ukraine	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	1/18/2002
CO95/014	10/29/2011	16	1161	4/29/2012	10/29/2016	Australia	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	10/14/1999
CO95/014	10/29/2011	16	1679	7/29/2012	10/29/2016	Brazil	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	10/26/2004
CO95/014	10/29/2011	15	533	10/29/2012	10/29/2016	Canada	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	10/12/2004
CO95/014	10/29/2011	16	1320	4/29/2012	10/29/2016	China P.R.	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	9/4/2002
CO95/014	10/31/2011	10	384	4/30/2012	10/31/2017	Malaysia	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	10/31/2002
CO95/014	10/31/2011	16	952	4/30/2012		Norway	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	8/8/2007
CO95/014	10/31/2011	16	748	4/30/2012	10/29/2016	Great Britain	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	8/8/2007
CO95/014	10/31/2011	16	1950	4/30/2012	10/29/2016	Germany	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	8/8/2007
CO95/014	10/31/2011	16	709	5/31/2012	10/29/2016	Spain	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	8/8/2007
CO95/014	10/31/2011	16	1149	4/30/2012	10/29/2016	Finland	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	8/8/2007
CO95/014	10/31/2011	16	769	4/30/2012	10/29/2016	France	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	8/8/2007
CO95/014	10/31/2011	16	1036	4/30/2012	10/29/2016	Italy	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	8/8/2007
CO99/044	10/31/2011	5	255	4/30/2012	4/10/2023	Malaysia	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	10/31/2007

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CO95/014	11/4/2011	16	685	5/4/2012	11/4/2016	India	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER Changed to above at filing of Response to OA dated 03/02/2002 PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	11/4/1996
CO95/014	11/7/2011	16	140	8/7/2012	11/7/2016	Venezuela	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	11/7/1996
CO95/014	11/7/2011	16	64	5/7/2012	11/7/2016	South Africa	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	8/27/1997
CO95/014	12/23/2011	16	396	12/23/2012	12/23/2016	Egypt	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	5/31/2000
CO97/012	12/28/2011	14	61	6/28/2012	12/28/2018	South Africa	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	9/29/1999
CO95/014	1/2/2012	16	1130	7/2/2012	1/2/2017	Hungary	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	10/25/2001
CO95/014	1/3/2012	16	882	7/1/2012	1/3/2017	Thailand	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	2/12/2007
CO95/014	1/3/2012	16	345	7/1/2012	1/3/2017	Argentina	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	6/30/2005
CO95/014	1/4/2012	16	461	7/4/2012	1/4/2017	Singapore	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	12/21/1998
COP-09647.0-01	1/31/2012	6	234	7/31/2012	1/31/2022	Malaysia	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	1/31/2007
CO97/008	3/2/2012	9	527	9/2/2012	6/11/2018	Korea South	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	3/2/2004
CO97/008	3/6/2012	4	505.0886	9/6/2012	6/11/2018	Japan	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	3/6/2009
CO97/004	3/16/2012	6	434.3065	9/16/2012	10/26/2010	Japan	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	3/16/2007
CO97/004	3/31/2012	9	235	9/30/2012	10/26/2010	Malaysia	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	3/31/2004
CO97/012	4/1/2012	14	515	4/1/2013	4/1/2019	Ukraine	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	4/7/2003
CO97/012	4/1/2012	13	296	4/1/2013	4/1/2019	Canada	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	12/30/2008
CO97/012	4/1/2012	14	1006	10/1/2012	4/1/2019	China P.R.	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	4/27/2005

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CO99/044	4/8/2012	10	236	4/8/2013	4/8/2023	Egypt	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	8/22/2005
CO99/044	4/10/2012	10	260	10/10/2012	4/10/2023	Australia	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM DELAYED COKING GAS OIL	2/5/2009
CO99/044	4/10/2012	10	306	1/10/2013		Brazil	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL	
CO99/044	4/10/2012	9	237	4/10/2013	4/10/2023	Canada	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL	4/20/2010
CO99/044	4/10/2012	10	692	10/10/2012	4/10/2023	China P.R.	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	7/26/2006
CO99/044	4/10/2012	10	235	10/10/2012	4/10/2023	Eurasian Patent Convention	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	10/27/2005
CO99/044	4/10/2012	10	515	4/10/2013	4/10/2023	Ukraine	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL	4/25/2007
CO99/044	4/10/2012	10	54	10/10/2012	4/10/2023	South Africa	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL	12/28/2005

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CO99/044	4/10/2012	10	152	10/10/2012	4/10/2023	Armenia	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL. Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	10/27/2005
CO99/044	4/10/2012	10	135	10/10/2012	4/10/2023	Azerbaijan	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL. Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	10/27/2005
CO99/044	4/10/2012	10	429	10/10/2012	4/10/2023	Belarus	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL. Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	10/27/2005
CO99/044	4/10/2012	10	489	10/10/2012	4/10/2023	Kyrgyzstan	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL. Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	10/27/2005
CO99/044	4/10/2012	10	429	10/10/2012	4/10/2023	Kazakhstan	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL. Title changed to above upon filing reg. app. on 11AP2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	10/27/2005



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CO99/044	4/10/2012	10	398	10/10/2012	4/10/2023	Moldova	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	10/27/2005
CO99/044	4/10/2012	10	349	10/10/2012	4/10/2023	Russian Federation	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	10/27/2005
CO99/044	4/10/2012	10	230	10/10/2012	4/10/2023	SKEL-TADJ	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	10/27/2005
CO99/044	4/10/2012	10	295	10/10/2012	4/10/2023	Turkmenistan	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	10/27/2005
CO99/044	4/11/2012	10	370	10/8/2012	4/11/2023	Argentina	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	7/30/2010
TOSCOLA006A	4/26/2012	8	2480	10/26/2012	5/3/2023	United States	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002 SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)  COKE DRUM BOTTOM HEAD REMOVAL SYSTEM	10/26/2004

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CO97/012	4/30/2012	14	1352	10/30/2012	4/1/2019	Netherlands	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	10/6/2004
CO97/012	4/30/2012	14	830	10/30/2012	4/1/2019	Norway	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	2/21/2011
CO97/012	4/30/2012	14	494	10/30/2012	4/1/2019	Sweden	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	10/6/2004
CO97/012	4/30/2012	14	1449	10/30/2012	4/1/2019	Germany	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	10/6/2004
CO97/012	4/30/2012	14	566	11/30/2012	4/1/2019	Spain	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	10/6/2004
CO97/012	4/30/2012	14	644	10/30/2012	4/1/2019	France	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	10/6/2004
CO97/012	4/30/2012	14	529	10/30/2012	4/1/2019	Great Britain	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	10/6/2004
CO97/012	4/30/2012	14	958	10/31/2012	4/1/2019	Italy	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	10/6/2004
CO99/044	4/30/2012	10	587	10/30/2012		Norway	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	10/6/2004
CO99/044	4/30/2012	10	2282	10/30/2012		European Patent Convention	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL	
CO95/014	5/27/2012	12	703	11/27/2012	1/7/2017	Taiwan	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM DELAYED COKING GAS OIL	5/28/2001
CO97/004	6/9/2012	9	571	12/9/2012	6/11/2018	Korea South	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	6/9/2004
CO97/004	6/11/2012	15	983	12/11/2012	6/11/2018	Mexico	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	2/7/2002
CO97/004	6/11/2012	15	1079	12/11/2012	6/11/2018	Russian Federation	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	4/29/2002
CO97/004	6/11/2012	15	1314	3/11/2013	12/30/2018	Brazil	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	12/30/2008
CO97/004	6/11/2012	14	296	6/11/2013	6/11/2018	Canada	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	6/14/2005
CO97/004	6/11/2012	15	1006	12/11/2012	6/11/2018	China P.R.	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	5/12/2004
CO97/008	6/11/2012	15	983	12/11/2012	6/11/2018	Mexico	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	2/7/2002

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CO97/008	6/11/2012	15	1079	12/11/2012	6/11/2018	Russian Federation	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	3/28/2002
CO97/008	6/11/2012	15	1314	3/11/2013	3/23/2020	Brazil	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	3/23/2010
CO97/008	6/11/2012	14	296	6/11/2013	6/11/2018	Canada	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	3/23/2003
CO97/008	6/11/2012	15	1006	12/11/2012	6/11/2018	China P.R.	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	3/31/2004
CO97/004	6/17/2012	15	454	12/17/2012	6/17/2018	India	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	11/3/2005
CO97/008	6/17/2012	15	454	12/17/2012	6/17/2018	India	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	12/16/2005
CO99/044	6/20/2012	7	365	12/20/2012	4/10/2023	Taiwan	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL	6/21/2006
CO97/008	6/23/2012	15	123	3/23/2013	6/23/2018	Venezuela	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	6/23/1998
CO97/004	6/30/2012	15	1817	12/30/2012	4/6/2010	Germany	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2012	15	819	12/30/2012	4/6/2010	Denmark	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2012	15	1119	12/31/2012	4/6/2010	Italy	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2012	15	1438	12/30/2012	4/6/2010	Austria	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2012	15	728	12/30/2012	4/6/2010	France	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2012	15	468	12/30/2012	4/6/2010	Great Britain	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005

Title changed to above upon filing reg. app. on 11/14/2002 APPLICATION OF SMALL HYDROCYCLONES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)

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CO97/004	6/30/2012	15	534	12/30/2012	4/6/2010	Sweden	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2012	15	1521	12/30/2012	4/6/2010	Netherlands	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2012	15	627	1/30/2013	6/11/2018	Spain	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/004	6/30/2012	15	1070	12/30/2012	6/11/2018	Finland	Coke-Fuel/Process	DELAYED COKING CYCLE TIME REDUCTION	9/14/2005
CO97/008	6/30/2012	15	1521	12/30/2012	6/11/2018	Netherlands	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	9/15/2004
CO97/008	6/30/2012	15	1119	12/31/2012	6/11/2018	Italy	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	9/15/2004
CO97/008	6/30/2012	15	728	12/30/2012	6/11/2018	France	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	9/15/2004
CO97/008	6/30/2012	15	468	12/30/2012	2/4/2011	Great Britain	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	9/15/2004
CO97/008	6/30/2012	15	1817	12/30/2012	6/11/2018	Germany	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	9/15/2004
CO97/008	6/30/2012	15	627	1/30/2013	6/11/2018	Spain	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	9/15/2004
CO97/008	6/30/2012	7	314	12/30/2012	6/30/2021	Malaysia	Coke-Fuel/Process	REDUCTION OF METAL STRESSES IN DELAYED COKING DRUMS	6/30/2006
CO97/012	7/11/2012	5	447	1/11/2013	4/1/2019	Japan	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	7/11/2008
CO99/044	7/13/2012	4	980	1/13/2013	3/1/2024	United States	Coke-Fuel/Process	SEPARATION APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL	1/13/2009
CO95/014	7/20/2012	9	613	1/20/2013	10/29/2016	Korea South	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	7/20/2004
CO97/026	8/8/2012	8	2480	2/8/2013	3/27/2022	United States	Coke-Fuel/Process	ALTERNATE COKE FURNACE TUBE ARRANGEMENT	2/8/2005
CO97/012	8/13/2012	12	4110	2/13/2013	5/15/2018	United States	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	2/13/2001
COP-09647.0-01	8/31/2012	13	296	8/31/2013	8/31/2019	Canada	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	12/9/2003
COP-09647.0-01	8/31/2012	14	1006	2/28/2013	8/31/2019	China P.R.	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	4/22/2005

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COP-09647.0-01	8/31/2012	14	566	3/31/2013	8/31/2019	Spain	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	3/12/2008
COP-09647.0-01	8/31/2012	14	597	2/28/2013	8/31/2019	France	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	3/12/2008
COP-09647.0-01	8/31/2012	14	1449	2/28/2013	8/31/2019	Germany	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	3/12/2008
COP-09647.0-01	8/31/2012	14	435	2/28/2013	8/31/2019	India	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	7/26/2007
COP-09647.0-01	8/31/2012	14	830	2/28/2013	8/31/2019	Norway	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	5/18/2010
COP-09647.0-01	8/31/2012	14	515	8/31/2013	8/31/2019	Ukraine	Coke-Fuel/Process	AN APPARATUS AND METHOD FOR REMOTELY OPERATING A VESSEL COVER EXCHANGE ASSEMBLY Title changed to above upon Decision to Grant 30SEZ002 COKE DRUM SEMI AUTOMATIC TOP DEHEADER	12/16/2002
COP-09647.0-01	8/31/2012	14	529	2/28/2013	8/31/2019	Great Britain	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	3/12/2008
COP-09647.0-01	8/31/2012	14	958	2/28/2013	8/31/2019	Italy	Coke-Fuel/Process	COKE DRUM SEMI AUTOMATIC TOP DEHEADER	3/12/2008
C095/014	9/7/2012	15	1069	9/7/2013	12/31/2016	Indonesia	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	9/8/2000
34173	9/14/2012	8	143	3/14/2013	9/14/2025	Armenia	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2012	8	108	3/14/2013	9/14/2025	Azerbaijan	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2012	8	296	3/14/2013	9/14/2025	Belarus	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2012	8	429	3/14/2013	9/14/2025	Kyrgyzstan	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2012	8	429	3/14/2013	9/14/2025	Kazakhstan	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2012	8	398	3/14/2013	9/14/2025	Moldova	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2012	8	240	3/14/2013	9/14/2025	Russian Federation	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2012	8	163	3/14/2013	9/14/2025	SKEL-TADJ	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008

Docket Number	Next Tax Date	Tax Year	Projected Due	Drop Date	Expiration Date	Country	Technology Area	Title	Grant Date
34173	9/14/2012	8	245	3/14/2013	9/14/2025	Turkmenistan	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
34173	9/14/2012	7	237	9/14/2013	9/14/2025	Canada	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING DEVICE	9/28/2010
34173	9/14/2012	8	378	3/14/2013	9/14/2025	China P.R.	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING DEVICE	10/27/2010
34173	9/14/2012	8	208	3/14/2013	9/14/2025	Eurasian Patent Convention	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM AND METHOD	8/29/2008
CO97/012	9/20/2012	11	703	3/20/2013	12/20/2018	Taiwan	Coke-Fuel/Process	IMPROVED DELAYED COKE UNIT FURNACE	9/21/2002
34173	9/30/2012	8	1809	3/30/2013		European Patent Convention	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING DEVICE	
COP-09647.0-01	10/16/2012	4	698.7174	4/16/2013	8/31/2019	Japan	Coke-Fuel/Process	COKE DRUM SEMI-AUTOMATIC TOP DEHEADER	10/16/2009
CO97/026	10/28/2012	4	980	4/28/2013	2/23/2023	United States	Coke-Fuel/Process	ALTERNATE COKE FURNACE TUBE ARRANGEMENT	4/28/2009
CO95/014	10/29/2012	17	1079	4/29/2013	10/29/2016	Russian Federation	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKE	9/10/2002
CO95/014	10/29/2012	17	831	10/29/2013	10/29/2016	Ukraine	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKE	1/18/2002
CO95/014	10/29/2012	17	1161	4/29/2013	10/29/2016	Australia	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKE	10/14/1999
CO95/014	10/29/2012	17	1679	7/29/2013	10/29/2016	Brazil	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKE	10/26/2004
CO95/014	10/29/2012	16	533	10/29/2013	10/29/2016	Canada	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKE	10/12/2004
CO95/014	10/29/2012	17	1320	4/29/2013	10/29/2016	China P.R.	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKE	9/4/2002
CO95/014	10/31/2012	11	411	4/30/2013	10/31/2017	Malaysia	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKE	10/31/2002
CO95/014	10/31/2012	17	1012	4/30/2013		Norway	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKE	
CO95/014	10/31/2012	17	839	4/30/2013	10/29/2016	Great Britain	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKE	8/8/2007
CO95/014	10/31/2012	17	2232	4/30/2013	10/29/2016	Germany	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKE	8/8/2007

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CO95/014	10/31/2012	17	788	5/31/2013	10/29/2016	Spain	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	8/8/2007
CO95/014	10/31/2012	17	1227	4/30/2013	10/29/2016	Finland	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	8/8/2007
CO95/014	10/31/2012	17	863	4/30/2013	10/29/2016	France	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	8/8/2007
CO95/014	10/31/2012	17	1036	4/30/2013	10/29/2016	Italy	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	8/8/2007
CO99/044	10/31/2012	6	283	4/30/2013	4/10/2023	Malaysia	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL Title changed to above upon filing reg. app. on 11AP2002	10/31/2007
CO95/014	11/4/2012	17	705	5/4/2013	11/4/2016	India	Coke-Fuel/Process	APPLICATION OF SMALL HYDROCYCLES FOR THE REMOVAL OF ULTRA-FINE COKE PARTICLES FROM DELAYED COKER GAS OILS, INCLUDING FLASH ZONE OIL (FZGO)	11/4/1996
CO95/014	11/7/2012	17	140	8/7/2013	11/7/2016	Venezuela	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	11/7/1996
CO95/014	11/7/2012	17	67	5/7/2013	11/7/2016	South Africa	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	8/27/1997
COP-09647.0-01	11/8/2012	12	4110	5/8/2013	8/31/2019	United States	Coke-Fuel/Process	COKE DRUM SEMI-AUTOMATIC TOP DEHEADER	5/8/2001
34173	11/19/2012	4	980	5/19/2013	11/23/2026	United States	Coke-Fuel/Process	COKE DRUM BOTTOM UNHEADING SYSTEM	5/19/2009
CO99/044	12/4/2012	4	1260.241	6/4/2013	4/10/2023	Japan	Coke-Fuel/Process	SEPARATION PROCESS AND APPARATUS FOR REMOVAL OF PARTICULATE MATERIAL FROM FLASH ZONE GAS OIL	12/4/2009
CO95/014	12/23/2012	17	426	12/23/2013	12/23/2016	Egypt	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	5/31/2000
CO97/012	12/28/2012	15	64	6/28/2013	12/28/2018	South Africa	Coke-Fuel/Process	IMPROVED DELAYED COKER UNIT FURNACE	9/29/1999
CO95/014	1/2/2013	17	1173	7/2/2013	1/2/2017	Hungary	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	10/25/2001

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CO95/014	1/3/2013	17	1002	7/2/2013	1/3/2017	Thailand	Coke-Fuel/Process	PROCESS FOR UPGRADING THE FLASH ZONE GAS OIL STREAM FROM A DELAYED COKER	2/12/2007

**REGISTERED TRADEMARKS:**

<i>Jurisdiction</i>	<i>Number</i>	<i>Mark</i>	<i>Class No.</i>
United States	2899719	THRUPLUS	42
Canada	644702	THRUPLUS	

**UNREGISTERED TRADEMARKS:**

Regcoke™  
 TubeData™  
 Slur Coke™  
 MiniCoker™

**LOGOS AND INTERNET DOMAIN NAMES:**

None.

**ADDITIONAL THRUPLUS® COKING TECHNOLOGY:**

All Intellectual Property embodied within:

1. Coke drum mechanical design methodology, including drawings, specifications, models, manuals, and software relating to the Business.
2. Coker furnace design methodology, including available drawings, specifications, models, manuals, and software relating to the Business
3. Pit/pad design methodology, including sloped wall design, fines settling basin design with inlet screen with available drawings, specifications, models, manuals, and software relating to the Business
4. Quench/cutting water and refinery sludge reprocessing design methodology, including sizing of quench water pumps and quench water storage tank; with available drawings, specifications, models, manuals, and software relating to the Business
5. "Sludge coking" flow scheme, equipment requirements, operating guidelines, and restrictions on sludge contaminants with available drawings, specifications, models, manuals, and software relating to the Business
6. Distillate recycle technology, including the effects of varying recycle stream boiling range and flow rate on yield structure, including copy of database.



7. Coker fractionator "flash zone gas oil" tray and filtration system design, including available drawings, specifications, models, manuals, and software relating to the Business
8. Coker fractionator top water wash design, including draw-off tray and piping analytical design with available drawings, specifications, models, manuals, and software relating to the Business
9. Detailed safety interlock matrix for all phases of the semi-batch coking operations, including available drawings, specifications, models, manuals, and software relating to the Business
10. Closed blowdown system design methodology, including refinery slop oil reprocessing, coke drum/CBS depressuring with available drawings, specifications, models, manuals, and software relating to the Business
11. Switch deck piping and laydown design.
12. Copies of procedures for: online spalling; coke drum steam-out and water quench; and antifoam addition with available drawings, specifications, models, manuals, and software relating to the Business
13. Process design package (PDP) templates, including standardized drawings (PFD's, P&ID's, and plot plans), equipment data sheets, mechanical specifications for specialized delayed coker equipment (coke drums, furnace, unheading valves, coke cutting system, furnace charge pump, switch valves and coke drum isolation valves, coke drum nuclear level instruments, and coke crusher systems), HYSYS simulation model (fractionator and gas plant including the coke drum overhead vapor characterization program, and the closed blowdown system), and PDP write-ups (design basis, process description, process control philosophy, equipment summary, utility summary, chemical summary, emissions summary, and operating guidelines). Pro forma agreements.
- 14.
15. Copies of licensing proposals dated January 1, 2004 or later.
16. All project data managed by Coker Licensing for the projects listed on Schedule 4.10(a) and 4.11(a) including process design packages.
17. That portion of COP's delayed coking library relating to the Business
18. The following commercial information relating to the Business:
  - a. Customer and prospects lists, including contact information.
  - b. Correspondence with licensees and prospects (including emails) which make commitments of manpower and resources
  - c. All available project records for work performed since 2004, including hours, costs, and revenue.
19. Coke drum dual inlet design including CFD model input files and copies of reports on CFD modeling studies performed prior to Closing.
20. Copies of coker licensing focused research pilot plant and bench scale data for:
  - a. Batch coker yield test
  - b. Coking propensity test
  - c. Shot coke propensity test
  - d. Foaming propensity test
  - e. Asphaltene stability test