

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT7106267

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST	
<b>CONVEYING PARTY DATA</b>		
<b>Name</b>		<b>Execution Date</b>
HYPERTHERM, INC.		12/30/2021
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	BANK OF AMERICA, N.A.	
<b>Street Address:</b>	900 ELM STREET, 17TH FLOOR	
<b>City:</b>	MANCHESTER	
<b>State/Country:</b>	NEW HAMPSHIRE	
<b>Postal Code:</b>	03101	
<b>PROPERTY NUMBERS Total: 464</b>		
<b>Property Type</b>	<b>Number</b>	
Application Number:	13607054	
Application Number:	14641822	
Application Number:	15971485	
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Application Number:	16785027
Application Number:	16742699
Application Number:	16737574
Application Number:	16733764

#### **CORRESPONDENCE DATA**

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<b>ATTORNEY DOCKET NUMBER:</b>	104719.0001
<b>NAME OF SUBMITTER:</b>	MUSSIE B BEYENE
<b>SIGNATURE:</b>	/Mussie B Beyene/

01/05/2022

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NOTICE  
OF  
GRANT OF SECURITY INTEREST  
IN  
PATENTS

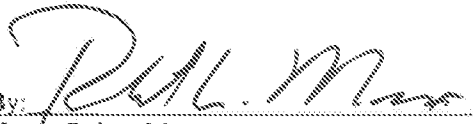
United States Patent and Trademark Office

Ladies and Gentlemen:

Please be advised that pursuant to the Security and Pledge Agreement dated as of December 30, 2021 (as amended, modified, extended, restated, renewed, replaced, or supplemented from time to time, the “Agreement”) by and among the Grantors party thereto (each a “Grantor” and collectively, the “Grantors”) and Bank of America, N.A., as Collateral Agent (the “Collateral Agent”) for Barings LLC and the other Secured Parties referenced therein, the undersigned Grantor has granted a continuing security interest in and continuing lien upon the patents and patent applications shown on Schedule 1 attached hereto to the Collateral Agent for the ratable benefit of the Secured Parties.

The undersigned Grantor and the Collateral Agent, on behalf of the Secured Parties, hereby acknowledge and agree that the security interest in the foregoing patents and patent applications (a) may only be terminated in accordance with the terms of the Agreement and (b) is not to be construed as an assignment of any patent or patent application.

HYPERTHERM, INC.

By: 

Name: Robert Masson

Title: Executive Vice President and  
Chief Financial Officer

**BANK OF AMERICA, N.A.,**  
as Collateral Agent

By: John Lynch  
Name: John Lynch  
Title: Senior Vice President

**Schedule 1**

**2021 U.S. Patent Schedule**

**Hyperterm US Patent Report**

Reference #	Title	City	Serial #	Filed Date	Patent #	Issue Date	Status
ACC-001	Intensifier Pump Monitoring System	US	13/607,054	09/07/2012			ABANDONED
ACC-002	Compact Ultrahigh Pressure Dynamic Seal Assembly with Pressure Activating Backup Ring	US	14/641,822	03/09/2015	9,989,054	06/05/2018	ISSUED
ACC-002DV	Compact Ultrahigh Pressure Dynamic Seal Assembly with Pressure Activating Backup Ring	US	15/971,485	05/04/2018			PUBLISHED
ACC-002PR	Compact Ultrahigh Pressure Dynamic Seal Assembly with Pressure Activating Backup Ring	US	61/949,798	03/07/2014			EXPIRED
ACC-003	Liquid Pressurization Pump and Systems with Data Storage	US	14/641,897	03/09/2015	9,993,934	06/12/2018	ISSUED
ACC-003CP	WATERJET CUTTING HEAD TEMPERATURE SENSOR	US	15/974,557	05/08/2018			SHADOW
ACC-003CPCI	LIQUID PRESSURIZATION PUMP AND SYSTEMS WITH DATA STORAGE	US	16/521,319	07/24/2019			PUBLISHED
ACC-003PR	Waterjet Intensifier Pump and Systems with RFID	US	61/949,922	03/07/2014			EXPIRED
ACC-004	Pedestal Style Waterjet Office Assembly	US	14/272,180	05/07/2014	9,346,147	05/24/2016	ISSUED
ACC-005	ADAPTIVE MAINTENANCE OF A PRESSURIZED FLUID CUTTING SYSTEM	US	16/017,883	06/25/2018			PUBLISHED
CTT-001	Electrode for a Plasma Arc Torch Having an Enhanced Cooling Configuration	US	09/652,444	08/31/2000	6,403,915	06/11/2002	ISSUED
CTT-002	Composite Electrode for a Plasma Arc Torch	US	10/094,000	03/08/2002	6,841,754	01/11/2005	ABANDONED

Reference #	Title	City	Serial #	Filed Date	Patent #	Issue Date	Status
CTT-002C1	Composite Electrode for a Plasma Arc Torch	US	10/957,478	09/30/2004			ABANDONED
CTT-002C2	Composite Electrode for a Plasma Arc Torch	US	11/495,945	07/28/2006	7,659,488	02/09/2010	ISSUED
CTT-002C2RE	Composite Electrode for a Plasma Arc Torch	US	13/552,916	01/18/2012	RE46925	06/26/2018	ISSUED
CTT-002PR	COMPOSITE ELECTRODE FOR A PLASMA ARC TORCH	US	60/274,837	03/09/2001			EXPIRED
CTT-002RX	Composite Electrode for a Plasma Arc Torch	US	95/001,979	04/25/2012			ABANDONED
CTT-003	Electrode for a Plasma Arc Cutting Torch with Axial Flow Diverters	US					PROPOSED
CTT-004	Nozzle Assembly for Plasma Arc Cutting Torch	US	07/966,973	10/27/1992	5,308,949	05/03/1994	EXPIRED
CTT-005	Mounting Scheme for a Plasma Arc Torch	US	08/548,096	10/25/1995	5,683,599	11/04/1997	EXPIRED
HTA-001	Centralized Control Architecture for a Plasma Arc System	US	09/546,155	04/10/2000	6,622,058	09/16/2003	ISSUED
HTA-002	Centralized Control Architecture for a Plasma Arc System	US	09/546,036	04/10/2000	6,772,040	08/03/2004	ISSUED
HTA-002CN	Centralized Control Architecture for a Plasma System	US	10/874,569	06/23/2004	6,900,408	05/31/2005	ISSUED
HTA-003	Centralized Control Architecture for a Plasma Arc System	US	09/546,470	04/10/2000	6,359,251	03/19/2002	ISSUED
HYP-001	METHOD AND APPARATUS FOR POSITIONING A PLASMA ARC CUTTING TORCH	US	07/846,637	10/31/1977	4,203,022	05/13/1980	EXPIRED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-001	GENERAL. COOLING AND HEIGHT SENSING SYSTEM FOR A PLASMA ARC CUTTING TOOL	US					PROPOSED
HYP-002	COOLING AND HEIGHT SENSING SYSTEM FOR A PLASMA ARC CUTTING TOOL	US	07/230,025	01/30/1981	4,361,748	11/30/1982	EXPIRED
HYP-003	Underwater and Above- Water Plasma Arc Cutting Torch and Method	US	06/365,466	04/05/1982	4,421,970	12/20/1983	EXPIRED
HYP-004FW	Arc Plasma Torch and Method Using Contact Starting	US	07/057,729	06/02/1987	4,816,637	03/28/1989	ABANDONED
HYP-005	Apparatus and Process for Cooling a Plasma Arc Electrode	US	07/009,508	01/30/1987	4,791,268	12/13/1988	EXPIRED
HYP-006	Nozzle Shield for a Plasma Arc Torch	US	07/249,407	09/26/1988	4,902,871	02/20/1990	EXPIRED
HYP-007	Nozzle Shield for a Plasma Arc Torch	US	07/203,440	06/07/1988	4,861,962	08/29/1989	EXPIRED
HYP-007RX	Nozzle Shield for a Plasma Arc Torch	US	90/003,834	06/08/1995	4,861,962	07/16/1996	EXPIRED
HYP-008	Plasma Arc Torch with Improved Nozzle Shield and Step Flow	US	07/395,266	08/17/1989	5,120,930	06/09/1992	EXPIRED
HYP-008CN	PLASMA ARC TORCH WITH IMPROVED NOZZLE SHIELD AND STEP FLOW	US	07/718,953	06/21/1991	5,132,512	07/21/1992	EXPIRED
HYP-009	Pneumatic-Electric Quick Disconnect Connector for a Plasma Arc Torch	US	07/406,035	09/12/1989	5,074,802	12/24/1991	EXPIRED
HYP-010	Process and Apparatus for Reducing Electrode Wear in a Plasma Arc Torch	US	07/513,780	04/24/1990	5,070,227	12/03/1991	EXPIRED
HYP-011	Process and Apparatus for Reducing Electrode Wear in a Plasma Arc Torch	US	07/682,992	04/12/1991	5,166,494	11/24/1992	EXPIRED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-012	Swirl Ring and Flow Control Process for a Plasma Arc Torch	US	07/682,991	04/12/1991	5,170,033	12/08/1992	EXPIRED
HYP-013	Switching Power Supply	US	07/329,956	03/29/1989	4,916,599	04/10/1990	ABANDONED
HYP-014	PLASMA ARC TRANSFER CONTROLLER	US	07/332,591	04/03/1989	4,996,407	02/26/1991	ABANDONED
HYP-015	Plasma Arc Cutting Process and Apparatus Using an Oxygen-Rich Gas Shield	US	07/753,395	08/30/1991	5,396,043	03/07/1995	EXPIRED
HYP-015CN	Plasma Arc Cutting Process and Apparatus Using an Oxygen-Rich Gas Shield	US	08/595,797	02/02/1996	5,695,662	12/09/1997	EXPIRED
HYP-015DV	Plasma Arc Cutting Process and Apparatus Using an Oxygen-Rich Gas Shield	US	08/394,707	02/27/1995	5,591,357	01/07/1997	EXPIRED
HYP-016	Nozzle and Method of Operation for a Plasma Arc Torch	US	07/820,278	01/14/1992	5,317,126	05/31/1994	EXPIRED
HYP-017FW	ARC TORCH HAVING AN ANGLED INNER SURFACE TO FACILITATE AND	US	07/424,675	01/21/1992	5,164,568	11/17/1992	ABANDONED
HYP-018	Improved Electrode for High Current Density Plasma Arc Torch	US	07/886,067	05/20/1992	5,310,988	05/10/1994	EXPIRED
HYP-019	PLASMA ARC TORCH IGNITION METHOD	US	07/885,521	05/19/1992	5,296,665	03/22/1994	ABANDONED
HYP-020	Process for High Quality Plasma Arc Cutting of Stainless Steel and Aluminum	US	07/989,183	12/11/1992	5,414,236	05/09/1995	EXPIRED
HYP-021	Process for High Quality Plasma Arc and Laser Cutting of Stainless Steel and Aluminum	US	08/024,416	03/01/1993	5,380,976	01/10/1995	EXPIRED
HYP-021C2	Process for High Quality Plasma Arc and Laser Cutting of Stainless Steel and Aluminum	US	08/711,162	09/09/1996	5,653,896	08/05/1997	EXPIRED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-021CN	Process for High Quality Plasma Arc and Laser Cutting of Stainless Steel and Aluminum	US	08/319,470	10/06/1994	5,558,786	09/24/1996	EXPIRED
HYP-022	Plasma Arc Torch Ignition Circuit and Method	US	08/039,898	03/30/1993	5,416,297	05/16/1995	EXPIRED
HYP-023	Electrode for a Plasma Arc Torch	US	08/283,070	07/29/1994	5,464,962	11/07/1995	EXPIRED
HYP-023CN	Electrode for a Plasma Arc Torch	US	08/554,638	11/06/1995	5,601,734	02/11/1997	EXPIRED
HYP-024	Plasma Arc Cutting Torch Ignition Circuit and Method Providing a Forced Arc Transfer Function	US	08/361,730	12/22/1994	5,548,097	08/20/1996	EXPIRED
HYP-026	FOR OPERATING A PLASMA ARC TORCH, OTHER TOOLS OR WEAPONS	US	08/359,909	12/20/1994	5,597,497	01/28/1997	ABANDONED
HYP-027	Alignment Device and Method for a Plasma Arc Torch System	US	08/368,329	01/04/1995	5,624,586	04/29/1997	EXPIRED
HYP-028	PLASMA ARC TORCH SYSTEM AND METHOD FOR REPLACING A TORCH IN SUCH	US	08/368,626	01/04/1995	5,635,088	06/03/1997	ABANDONED
HYP-029	Circuitry and Method for Maintaining a Plasma Arc During Operation of a Plasma Arc Torch System	US	08/544,987	10/30/1995	5,620,617	04/15/1997	EXPIRED
HYP-030	Gas Mixtures For Plasma Arc Torch Cutting and Marking System	US	08/707,247	09/03/1996	5,773,788	06/30/1998	EXPIRED
HYP-031	Starting and Stopping a Plasma Arc Torch Used for Mechanized Cutting and Marking Applications	US	08/707,227	09/03/1996	5,760,363	06/02/1998	EXPIRED
HYP-033	Plasma Arc Torch and Method Using Blow Forward Contact Starting System	US	08/727,028	10/08/1996	5,994,663	11/30/1999	EXPIRED
HYP-034	Consumables for Plasma Arc Torch Using Blow Forward Contact Starting System	US	08/727,019	10/08/1996	5,897,795	04/27/1999	EXPIRED

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HYP-035	Apparatus and Method for Improved Assembly Concentricity in a Plasma Arc Torch	US	08/736,707	10/28/1996	5,841,095	11/24/1998	EXPIRED
HYP-037	Coolant Tube for Use in a Liquid-Cooled Electrode Disposed in a Plasma Arc Torch	US	08/738,723	10/28/1996	5,756,959	05/26/1998	ABANDONED
HYP-038	A SAFETY CIRCUIT FOR A BLOW FORWARD CONTACT START PLASMA ARC TORCH	US	08/870,476	06/06/1997	5,900,169	05/04/1999	ABANDONED
HYP-039	Blow Forward Contact Start Plasma Arc Torch with Distributed Nozzle Support	US	08/904,694	08/01/1997	5,886,315	03/23/1999	EXPIRED
HYP-040	Plasma Arc Torch With Vented Flow Nozzle Retainer	US	08/905,001	08/01/1997	6,084,199	07/04/2000	EXPIRED
HYP-041	Plasma Arc Torch Position Control	US	08/900,309	07/25/1997	5,866,872	02/02/1999	EXPIRED
HYP-041CP	Plasma Arc Torch Position Control	US	09/020,621	02/09/1998	6,028,287	02/22/2000	EXPIRED
HYP-042	Torch with an Exit Orifice Having an Inlet Radius and an Extended Length To Diameter Ratio	US	09/067,770	04/27/1998	5,977,510	11/02/1999	EXPIRED
HYP-043	Electrode for a Plasma Arc Torch Having an Improved Insert Configuration	US	09/119,163	07/20/1998	6,130,399	10/10/2000	EXPIRED
HYP-043RX	Electrode for a Plasma Arc Torch Having an Improved Insert Configuration	US	90/010,129	04/29/2008	6,130,399 C1	07/07/2009	EXPIRED
HYP-044	Plasma Arc Torch Tip Providing a Substantially Columnar Shield Flow	US	09/186,791	11/05/1998	6,207,923	03/27/2001	EXPIRED
HYP-045	System and Method for Dual Threshold Sensing in a Plasma Arc Torch	US	09/187,274	11/06/1998	6,133,543	10/17/2000	EXPIRED
HYP-046	Process and Apparatus for Cutting or Welding a Workpiece	US	09/665,650	09/20/2000	6,525,291	02/25/2003	ISSUED

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HYP-046C1	Process and Apparatus for Cutting or Welding a Workpiece	US	10/315,385	12/10/2002	6,713,709	03/30/2004	ISSUED
HYP-046C2	Process and Apparatus for Cutting or Welding a Workpiece	US	10/784,084	02/20/2004	7,049,540	05/23/2006	EXPIRED
HYP-046DV	Process and Apparatus for Cutting or Welding a Workpiece	US	10/314,645	12/09/2002	6,720,518	04/13/2004	ISSUED
HYP-046PR	APPARATUS FOR CUTTING OR WELDING A WORKPIECE (SEE COUNTRY APPL.	US	60/155,078	09/21/1999			EXPIRED
HYP-047	DSP Based Plasma Cutting System	US	09/515,139	02/29/2000	6,365,868	04/02/2002	ISSUED
HYP-048	Configurable Nozzle Baffle Apparatus and Method	US	09/717,775	11/21/2000	6,667,459	12/23/2003	ISSUED
HYP-049	Electrode for Plasma Arc Torch	US	09/631,814	08/03/2000	6,424,082	07/23/2002	ISSUED
HYP-049DV	Nozzle for Plasma Arc Torch	US	10/152,061	05/21/2002	6,614,001	09/02/2003	ISSUED
HYP-050	Strain Relief Mechanism for a Plasma Arc Torch	US	09/849,446	05/04/2001	6,472,631	10/29/2002	ISSUED
HYP-050C1	Strain Relief Mechanism for a Plasma Arc Torch	US	10/281,554	10/28/2002	6,852,943	02/08/2005	ISSUED
HYP-051	Method and Design for Underwater Starting Reliability	US					PROPOSED
HYP-052	PLASMA PROCESS AND APPARATUS FOR CUTTING A CABLE	US	10/247,011	09/19/2002			ABANDONED
HYP-052PR	PLASMA PROCESS AND APPARATUS FOR CUTTING A CABLE	US	60/323,242	09/19/2001			EXPIRED

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HYP-053	Method and Apparatus for Alignment of Components of a Plasma Arc Torch	US	10/411,801	04/11/2003	6,946,617	09/20/2005	ISSUED
HYP-053C1	Method and Apparatus for Alignment of Components of a Plasma Arc Torch	US	10/999,548	11/30/2004	7,019,255	03/28/2006	ISSUED
HYP-053C2	Method and Apparatus for Alignment of Components of a Plasma Arc Torch	US	11/347,960	02/06/2006	7,193,174	03/20/2007	ISSUED
HYP-053C3	Method and Apparatus for Alignment of Components of a Plasma Arc Torch	US	11/589,448	10/30/2006	7,754,996	07/13/2010	ISSUED
HYP-053C4	Method and Apparatus for Alignment of Components of a Plasma Arc Torch	US	12/544,386	08/20/2009			ABANDONED
HYP-053CP	Method and Apparatus for Alignment of Components of a Plasma Arc Torch	US	11/945,481	11/27/2007			ABANDONED
HYP-054CP	Centralized Control Architecture for a Laser Materials Processing System	US	10/403,688	03/31/2003	6,947,802	09/20/2005	ISSUED
HYP-054CPC1	Centralized Control Architecture for a Laser Materials Processing System	US	11/129,007	05/13/2005			ABANDONED
HYP-054CPC2	CENTRALIZED CONTROL ARCHITECTURE FOR A PLASMA ARC SYSTEM	US	11/323,006	12/30/2005			ABANDONED
HYP-054CPC3	CENTRALIZED CONTROL ARCHITECTURE FOR A PLASMA ARC SYSTEM	US	11/370,751	03/28/2006			ABANDONED
HYP-054CPC4	CENTRALIZED CONTROL ARCHITECTURE FOR A PLASMA ARC SYSTEM	US					INACTIVE
HYP-055	Process Monitor for Laser and Plasma Materials Processing of Materials	US	10/403,775	03/31/2003	7,186,947	03/06/2007	EXPIRED
HYP-055DV	Process Monitor for Laser and Plasma Materials Processing of Materials	US	11/653,008	01/12/2007			ABANDONED

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HYP-056PR	Plasma Arc Torch Tip	US	60/403,950	08/16/2002			EXPIRED
HYP-058	Plasma Arc Torch Having an Electrode With Internal Passages	US	10/989,729	11/16/2004	7,375,302	05/20/2008	ISSUED
HYP-058CP	Plasma Arc Torch Having an Electrode With Internal Passages	US	11/223,268	09/09/2005	7,375,303	05/20/2008	ISSUED
HYP-058CPCI	Plasma Arc Torch Having an Electrode With Internal Passages	US	12/101,909	04/11/2008	8,680,425	03/25/2014	ISSUED
HYP-059A	Plasma Arc Torch and Contact Start Plasma Arc Torch Employing Such Electrodes	US	11/709,315	02/20/2007	8,115,136	02/14/2012	ISSUED
HYP-059AC1	Plasma Arc Torch and Contact Start Plasma Arc Torch Employing Such Electrodes	US	13/331,906	12/20/2011	8,546,718	10/01/2013	ISSUED
HYP-059AC2	Plasma Arc Torch and Contact Start Plasma Arc Torch Employing Such Electrodes	US	13/331,947	12/20/2011	8,541,712	09/24/2013	ISSUED
HYP-059AC3	Plasma Arc Torch and Contact Start Plasma Arc Torch Employing Such Electrodes	US	15/296,494	10/18/2016	9,736,918	08/15/2017	ISSUED
HYP-059ACP	Plasma Arc Torch and Contact Start Plasma Arc Torch Employing Such Electrodes	US	13/344,860	01/06/2012	9,492,883	11/15/2016	ISSUED
HYP-059B	Plasma Arc Torch and Contact Start Plasma Arc Torch Employing Such Electrodes	US	11/709,318	02/20/2007	8,035,055	10/11/2011	ISSUED
HYP-059PR	Plasma Arc Torch and Contact Start Plasma Arc Torch Employing Such Electrodes	US	60/774,451	02/17/2006			EXPIRED
HYP-060	Dual Interleaved Chopper System	US					INACTIVE
HYP-061	Automated Focal Position	US					PROPOSED

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HYP-062	Automatic Gas Control For A Plasma Arc Torch Using Programmable Control Valves (As Amended)	US	11/045,012	01/27/2005			ABANDONED
HYP-062CP	Method and Apparatus for Automatic Gas Control For A Plasma Arc Torch (As Amended)	US	11/341,992	01/27/2006			ABANDONED
HYP-062CPC1	Method and Apparatus for Automatic Gas Control For A Plasma Arc Torch	US	11/899,848	09/07/2007	8,809,728	08/19/2014	ISSUED
HYP-062CPC2	Method and Apparatus for Automatic Gas Control For A Plasma Arc Torch (As Amended)	US	12/040,787	02/29/2008	8,541,710	09/24/2013	ISSUED
HYP-062CPC3	Automatic Gas Control For A Plasma Arc Torch Utilizing Valves and/or Venting (As Amended)	US	12/110,250	04/25/2008			ABANDONED
HYP-063	Frequency/ Variable Amplitude Controlled Sine-Cosine (Quadrature) Oscillato	US					INACTIVE
HYP-065	One Touch Connection and Disconnection Method and Apparatus	US	11/248,717	10/11/2005			ABANDONED
HYP-065CP	One-Touch Connection and Disconnection Method and Apparatus	US	11/394,371	03/30/2006			ABANDONED
HYP-066	Plasma Arc Torch Providing Angular Shield Flow Injection	US	11/407,370	04/19/2006	7,829,816	11/09/2010	ISSUED
HYP-066C1	Plasma Arc Torch Providing Angular Shield Flow Injection	US	12/940,722	11/05/2010	8,395,077	03/12/2013	ISSUED
HYP-066C2	Plasma Arc Torch Providing Angular Shield Flow Injection	US	13/689,011	11/29/2012			ABANDONED
HYP-066PR	Plasma Arc Torch Providing Angular Shield Flow Injection	US	60/672,777	04/19/2005			EXPIRED
HYP-067	Generating Discrete Gas Jets in Plasma Arc Torch Applications	US	11/432,282	05/11/2006	7,598,473	10/06/2009	ISSUED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-067PR	Apparatus and Methods for Generating Discrete Gas Jets in Plasma Arc Torch Applications	US	60/680,184	05/11/2005			EXPIRED
HYP-068	Electrical Properties in a Switch Mode Power Supply of a Thermal Processing	US	11/602,046	11/20/2006	7,911,816	03/22/2011	ISSUED
HYP-068PR	Linear, Inductance Based Control of Regulated Electrical Properties in a Switch Mode Power Supply	US	60/825,544	09/13/2006			EXPIRED
HYP-069	Optimized Coolant Flow for High Current Nozzle for Plasma Arc Torch	US					PROPOSED
HYP-070	Method and Apparatus for Sensing the Length of a Lead	US	11/888,345	07/31/2007	8,927,895	01/06/2015	ISSUED
HYP-070PR	Method for Detecting a Pressure Change in a Lead	US	60/962,775	07/31/2007			EXPIRED
HYP-071	Method and Apparatus for Improved Plasma Arc Torch Cut Quality	US	11/699,315	01/29/2007			ABANDONED
HYP-071PR	APPARATUS FOR IMPROVED PLASMA ARC TORCH CUT QUALITY	US	60/762,605	01/27/2006			EXPIRED
HYP-072	Plasma Torch Electrode with Improved Insert Configurations	US	11/468,393	08/30/2006	8,101,882	01/24/2012	ISSUED
HYP-072PR	Plasma Torch Electrode with Improved Insert Configurations	US	60/714,581	09/07/2005			EXPIRED
HYP-073	Reduced Rating Output Rectifier Snubber for Plasma Cutting Power Supply	US	11/490,746	07/21/2006			ABANDONED
HYP-073PR	Reduced Rating Output Rectifier Snubber for a Power Supply	US	60/701,570	07/23/2005			EXPIRED
HYP-074	Networking Architecture for Thermal Processing System	US	11/521,704	12/28/2005	7,709,765	05/04/2010	ISSUED

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HYP-075	Consumable Component Parts for a Plasma Torch	US	11/626,191	01/23/2007	8,866,038	10/21/2014	ISSUED
HYP-076	Apparatus for Cooling Plasma Arc Torch Nozzles	US	11/415,234	05/01/2006	7,605,340	10/20/2009	ISSUED
HYP-077	Automated Self Test for a Thermal Processing System	US	11/619,149	01/02/2007	7,778,799	08/17/2010	ISSUED
HYP-078A	Power Supply Cooling System	US	11/614,495	12/21/2006			ABANDONED
HYP-078APR	Power Supply Cooling System	US	60/825,520	09/13/2006			EXPIRED
HYP-078B	Power Supply Cooling System	US	11/614,523	12/21/2006			ABANDONED
HYP-078BPR	Power Supply Cooling System	US	60/825,515	09/13/2006			EXPIRED
HYP-078C	Power Supply Cooling Apparatus and Configuration	US	11/614,543	12/21/2006	7,800,901	09/21/2010	ISSUED
HYP-078CPR	Power Supply Cooling Apparatus and Configuration	US	60/825,510	09/13/2006			EXPIRED
HYP-079	Autonomous Plasma Cutting System	US	11/518,858	09/11/2006	7,615,719	11/10/2009	ISSUED
HYP-079CP	Wearable Autonomous Material Processing System	US	11/852,855	09/10/2007	8,203,096	06/19/2012	ISSUED
HYP-079CPCP	Portable Autonomous Material Processing System	US	12/045,670	03/10/2008	8,350,182	01/08/2013	ISSUED
HYP-079CPCPCI	Portable Autonomous Material Processing System	US	13/706,704	12/06/2012	8,890,021	11/18/2014	ISSUED

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HYP-079CPCC2	Portable Autonomous Material Processing System	US	14/492,871	09/22/2014			ABANDONED
HYP-080	Dielectric Devices for a Plasma Arc Torch	US	11/645,127	12/22/2006	8,097,828	01/17/2012	ISSUED
HYP-080PR	Dielectric Shield for a Plasma Arc Torch	US	60/825,477	09/13/2006			EXPIRED
HYP-081	Autonomous Welding Systems	US					PROPOSED
HYP-082	High Visibility Plasma Arc Torch	US	11/611,625	12/15/2006	7,989,727	08/02/2011	ISSUED
HYP-082C1	High Visibility Plasma Arc Torch	US	13/169,534	06/27/2011	8,153,927	04/10/2012	ISSUED
HYP-082PR	High Visibility Plasma Arc Torch	US	60/825,453	09/13/2006			EXPIRED
HYP-083	Arc Voltage Estimation and Use of Arc Voltage Estimation in Thermal Processing Systems	US	11/602,047	11/20/2006			ABANDONED
HYP-083PR	Arc Voltage Estimation and Use of Arc Voltage Estimation in Thermal Processing Systems	US	60/825,470	09/13/2006			EXPIRED
HYP-084	Pilot Arc Circuit for a Contact Start Plasma Torch	US	11/518,856	09/11/2006	7,615,720	11/10/2009	ISSUED
HYP-085	Plasma Arc Torch Cutting Component With Optimized Water Cooling	US	12/028,768	02/08/2008	8,772,667	07/08/2014	ISSUED
HYP-085CP	Plasma Arc Torch Cutting Component with Optimized Water Cooling	US	12/188,148	08/07/2008	8,829,385	09/09/2014	ISSUED
HYP-085PR	Plasma Cutting Component with Optimized Water Cooling	US	60/900,435	02/09/2007			EXPIRED

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HYP-086	Gas-Cooled Plasma Arc Cutting Torch	US	12/032,630	02/15/2008	8,089,025	01/03/2012	ISSUED
HYP-086PR	High Current Plasma Cutting Torch with Gas Cooling	US	60/901,804	02/16/2007			EXPIRED
HYP-087	Plasma Insensitive Height Sensing	US	11/697,599	04/06/2007	8,244,494	08/14/2012	ISSUED
HYP-087CP	Plasma Insensitive Height Sensing	US	12/593,228	09/25/2009	8,373,425	02/12/2013	ISSUED
HYP-088	Articulated Thermal Processing Torch	US	12/186,974	08/06/2008	8,614,404	12/24/2013	ISSUED
HYP-088CP	Articulating Thermal Processing Torches and Related Systems and Methods	US	14/104,645	12/12/2013	9,480,138	10/25/2016	ISSUED
HYP-088PR	Articulated Plasma Arc Torch	US	60/963,586	08/06/2007			EXPIRED
HYP-089	Liquid Cooled Shield for Improved Piercing Performance	US	12/046,670	03/12/2008	8,212,173	07/03/2012	ISSUED
HYP-089CP	Apparatus and Method for a Liquid Cooled Shield for Improved Piercing Performance	US	12/240,157	09/29/2008	8,389,887	03/05/2013	ISSUED
HYP-089CPD1	Apparatus and Method for a Liquid Cooled Shield for Improved Piercing Performance	US	13/568,577	08/07/2012	8,981,252	03/17/2015	ISSUED
HYP-089CPD1C1	Apparatus and Method for a Liquid Cooled Shield for Improved Piercing Performance	US	14/496,872	09/25/2014	9,789,561	10/17/2017	ISSUED
HYP-090	Connector for a Thermal Cutting System or Welding System	US	12/035,117	02/21/2008	7,762,830	07/27/2010	ISSUED
HYP-091	Binary Signal Detection	US	12/035,125	02/21/2008			ABANDONED

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HYP-092	Nozzle Head with Increased Shoulder Thickness Method and Apparatus for Operating an Automated High Temperature Thermal Cutting System	US	12/101,086	04/10/2008	8,513,565	08/20/2013	ISSUED
HYP-093	METHOD AND SYSTEM TO OPERATE A MECHANIZED TORCH SYSTEM	US	12/409,411	03/23/2009	8,204,618	06/19/2012	ISSUED
HYP-093PR		US	61/039,077	03/24/2008			EXPIRED
HYP-094	High Quality Hole Cutting Using Variable Shield Gas Compositions	US	12/341,731	12/22/2008	8,354,609	01/15/2013	ISSUED
HYP-094C1	High Quality Hole Cutting Using Variable Shield Gas Compositions	US	13/248,949	09/29/2011	8,354,610	01/15/2013	ISSUED
HYP-095	Nozzle with Exposed Vent Passage	US	12/241,922	09/30/2008	8,338,740	12/25/2012	ISSUED
HYP-096PR	Plasma Cutting Component with Fluid Flow Baffles for Optimized Nozzle Cooling	US	61/073,913	06/19/2008			ABANDONED
HYP-097PR	COOLING OF TORCH AND CONSUMABLES WITH FLOW FORWARD SPIRAL GROOVE HEAT	US	61/156,214	02/27/2009			INACTIVE
HYP-099	Internal Part Feature Cutting Method and Apparatus	US	12/466,786	05/15/2009	8,541,711	09/24/2013	ISSUED
HYP-099CP	Method and Apparatus for Cutting High Quality Internal Features and Contours	US	12/557,920	09/11/2009	8,338,739	12/25/2012	ISSUED
HYP-099CPCI	Method and Apparatus for Cutting High Quality Internal Features and Contours	US	13/250,979	09/30/2011	8,436,270	05/07/2013	ISSUED
HYP-099CPCID1	Method and Apparatus for Cutting High Quality Internal Features and Contours	US	13/718,540	12/18/2012	8,710,395	04/29/2014	ISSUED
HYP-099PR	HOLE CUTTING CALCULATIONS AND PROGRAMMING METHODS	US	61/154,259	02/20/2009			EXPIRED

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HYP-100	Plasma Arc Torch Rotational Assembly	US	12/748,839	03/29/2010	8,304,684	11/06/2012	ISSUED
HYP-100PR	ROTATIONAL PLASMA TORCH MOUNT SLEEVE	US	61/211,218	03/27/2009			EXPIRED
HYP-101PR	METHOD AND APPARATUS FOR TORCH TIP CONTROL	US	61/241,252	09/10/2009			EXPIRED
HYP-102	Plasma Torch Connector Assembly (Amended- removed the word Improved)	US	13/030,875	02/18/2011	8,766,134	07/01/2014	ISSUED
HYP-102PR	IMPROVED PLASMA TORCH ALIGNMENT FEATURE	US	61/305,636	02/18/2010			EXPIRED
HYP-103D	Mechanized Plasma Torch	US	29/357,891	03/18/2010	D654104	02/14/2012	ISSUED
HYP-104D	Plasma Hand Torch	US	29/358,752	03/31/2010	D625746	10/19/2010	ISSUED
HYP-105	Plasma Torch Electrode with Improved Cooling Capability	US	13/090,044	04/19/2011			ABANDONED
HYP-105PR	NEW COOLING DESIGN FOR PLASMA TORCH ELECTRODE	US	61/342,932	04/21/2010			EXPIRED
HYP-106	Adapter for a Plasma Arc Torch	US	12/878,512	09/09/2010	8,624,150	01/07/2014	ISSUED
HYP-106CP	Forward Flow, High Access Consumables for a Plasma Arc Cutting Torch	US	13/229,105	09/09/2011	8,981,253	03/17/2015	ISSUED
HYP-106CP2	High Access Consumables for a Plasma Arc Cutting System	US	14/610,011	01/30/2015	9,560,732	01/31/2017	ISSUED
HYP-106CP2PR	High Access Consumables for a Plasma Arc Cutting System	US	62/063,703	10/14/2014			EXPIRED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-106CP3	High Access Consumables for a Plasma Arc Cutting System	US	14/642,593	03/09/2015	10,194,516	01/29/2019	ISSUED
HYP-107	Protective Shell for a Hand Held Plasma Cutting Torch	US	13/183,918	07/15/2011	8,975,555	03/10/2015	ISSUED
HYP-107PR	Heat Shield for Plasma Cutting Hand Torch	US	61/365,088	07/16/2010			EXPIRED
HYP-108	Diffuser Shape Vent Slots in a Hand Torch Shield Castellation	US	12/967,407	12/14/2010	8,835,796	09/16/2014	ISSUED
HYP-108CP	Diffuser Shape Vent Slots in a Hand Torch Shield Castellation	US	14/468,258	08/25/2014	9,462,670	10/04/2016	ISSUED
HYP-108PR	Diffuser Shape Vent in Hand Torch Shield Castellation	US	61/365,158	07/16/2010			EXPIRED
HYP-108PR2	DIFFUSER SHAPE VENT IN HAND TORCH SHIELD CASTELLATION	US	61/365,247	07/16/2010			EXPIRED
HYP-109	Electronic Pressure Regulator	US	13/090,032	04/19/2011	8,847,103	09/30/2014	ISSUED
HYP-109PR	Electronic Pressure Regulator	US	61/365,249	07/16/2010			EXPIRED
HYP-110	Torch Flow Regulation Using Nozzle Features	US	12/980,858	12/29/2010	8,884,179	11/11/2014	ISSUED
HYP-110PR	Torch Flow Regulation Using Nozzle Features	US	61/365,202	07/16/2010			EXPIRED
HYP-111	Failure Event Detection in a Plasma Arc Torch	US	13/183,907	07/15/2011	10,039,178	07/31/2018	ISSUED
HYP-111PR	Pressure Loss Detection Method Using Voltage Signals	US	61/365,095	07/16/2010			EXPIRED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-112	Plasma Torch With LCD Display With Settings Adjustment and Fault Diagnosis	US	13/51,799	06/02/2011	8,853,588	10/07/2014	ISSUED
HYP-112CP	Plasma Torch With LCD Display With Settings Adjustment and Fault Diagnosis	US	14/486,569	09/15/2014	9,782,852	10/10/2017	ISSUED
HYP-112PR	LCD Display with Settings Adjustment and Fault Diagnosis	US	61/365,145	07/16/2010			EXPIRED
HYP-113PR	Variable Bevel Pivot Length to Minimize Part Size Deviation from Programmed Dimensions	US	61/458,933	12/03/2010			ABANDONED
HYP-114	Optimization and Control of Beam Quality for Material Processing	US	13/524,135	12/13/2011	9,339,890	05/17/2016	ISSUED
HYP-115	High Power Inductor and Ignition Transformer Using Planar Magnetics	US	13/543,236	07/06/2012			ABANDONED
HYP-115PR	High Power Inductor and Ignition Transformer Using Planar Magnetics	US	61/505,476	07/07/2011			EXPIRED
HYP-117	Thermal Torch Lead Gas Delivery Methods and Related Systems and Devices	US	13/904,734	05/29/2013	9,427,820	08/30/2016	ISSUED
HYP-117PR	Thermal Torch Lead Gas Delivery Systems and Related Systems and Devices	US	61/716,065	10/19/2012			EXPIRED
HYP-118	Optimization and Control of Material Processing Using a Thermal Processing Torch	US	13/439,259	04/04/2012	10,455,682	10/22/2019	ISSUED
HYP-118CP1	Optimization and Control of Material Processing Using a Thermal Processing Torch	US	13/560,059	07/27/2012			ABANDONED
HYP-118CP2	Identifying Thermal Processing Torch Components	US	14/075,692	11/08/2013			ABANDONED
HYP-118CP3	Systems, Methods, and Devices for Transmitting Information to Thermal Processing Systems	US	13/638,919	03/15/2013	10,486,260	11/26/2019	ISSUED

Reference #	Title	City	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-118CP3C1	Systems, Methods, and Devices for Transmitting Information to Thermal Processing Systems	US	16/698,654	10/10/2019			PENDING
HYP-118CP4	Identifying Liquid Jet Cutting System Components	US	14/135,714	12/20/2013	9,144,882	09/29/2015	ISSUED
HYP-118CP5	Identifying Components in a Material Processing System	US	14/589,270	01/05/2015	9,395,715	07/19/2016	ISSUED
HYP-118CP7A	Configuring Signal Devices in Thermal Processing Systems	US	14/807,589	07/23/2015	9,672,460	06/06/2017	ISSUED
HYP-118CP7B	Configuring Signal Devices in Thermal Processing Systems	US	14/807,679	07/23/2015			ABANDONED
HYP-118CP7BD1	Configuring Signal Devices in Thermal Processing Systems	US	15/863,402	01/05/2018	10,346,647	07/09/2019	ISSUED
HYP-118CP7BD1C1	Configuring Signal Devices in Thermal Processing Systems	US	16/425,197	05/29/2019			PUBLISHED
HYP-118CP7R	Configuring Signal Devices in Thermal Processing Systems	US	62/028,065	07/23/2014			EXPIRED
HYP-118CP8	Automatically Sensing Consumable Components in Thermal Processing Systems	US	15/056,437	02/29/2016	9,737,954	08/22/2017	ISSUED
HYP-118CP8PR	RHD Manual Cap Sense Switch	US	62/126,194	02/27/2015			EXPIRED
HYP-119D	Plasma Torch Electrode	US	29/415,273	03/08/2012	D692402	10/29/2013	ISSUED
HYP-120	Asymmetric Consumables for a Plasma Arc Torch	US	13/667,260	08/06/2012	9,107,282	08/11/2015	ISSUED
HYP-120CP	Consumables for a Plasma Arc Torch for Bevel Cutting	US	14/297,100	06/05/2014	9,497,845	11/15/2016	ISSUED

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HYP-120CP2	Asymmetric Consumables for a Plasma Arc Torch	US	15/550,742	11/14/2016	9,781,818	10/03/2017	ISSUED
HYP-120CP3	Asymmetric Consumables for a Plasma Arc Torch	US	15/685,659	08/24/2017			PUBLISHED
HYP-120CP4	Asymmetric Consumables for a Plasma Arc Torch	US	15/832,154	12/05/2017	10,314,155	06/04/2019	ISSUED
HYP-121	Composite Consumables for a Plasma Arc Torch	US	13/553,273	07/19/2012			ABANDONED
HYP-121CP1	Composite Consumables for a Plasma Arc Torch	US	13/570,526	08/09/2012	10,098,217	10/09/2018	ISSUED
HYP-121CP2	Composite Consumables for a Plasma Arc Torch	US	14/513,878	10/14/2014	9,662,747	05/30/2017	ISSUED
HYP-122	Method and Apparatus for Improved Cutting Life of a Plasma Arc Torch	US	13/475,393	05/18/2012	8,525,069	09/03/2013	ISSUED
HYP-122C1	Method and Apparatus for Improved Cutting Life of a Plasma Arc Torch	US	13/478,906	05/23/2012	8,759,709	06/24/2014	ISSUED
HYP-123	Flux Saturation Controller	US	13/860,317	04/10/2013	9,148,053	09/29/2015	ISSUED
HYP-123PR	High Frequency AC Link Inverter Transformer Flux Imbalance Control Method	US	61/622,139	04/10/2012			EXPIRED
HYP-124	Battery-Controlled Plasma Arc Torch System	US	13/672,956	11/09/2012	9,522,438	12/20/2016	ISSUED
HYP-125	Thermal Torch Lead Line Connection Devices and Related Systems and Methods	US	13/736,654	01/08/2013	9,148,943	09/29/2015	ISSUED
HYP-125PR	Thermal Torch Lead Line Connection Devices and Related Systems and Methods	US	61/716,193	10/19/2012			EXPIRED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-126	Automatic On-CNC Tool For Motion Analysis and Optimization	US	13/963,360	08/09/2013			ABANDONED
HYP-126PR	Automatic On-CNC Tool For Motion Analysis and Optimization	US	61/681,963	08/10/2012			EXPIRED
HYP-128	Induction Bend Cutting System	US	14/051,740	10/11/2013			ABANDONED
HYP-128PR	Induction Bend Cutting System	US	61/712,469	10/11/2012			EXPIRED
HYP-129	Plasma Torch Power Circuit and Cooling System	US	14/057,104	10/18/2013	9,950,387	04/24/2018	ISSUED
HYP-129PR	Plasma Torch Power Circuit and Cooling System	US	61/715,729	10/18/2012			EXPIRED
HYP-130	Thread Connection for a Torch System	US	14/031,420	09/19/2013	9,642,236	05/02/2017	ISSUED
HYP-130CP	Thread Connection for a Torch System	US	15/023,258	03/18/2016			ALLOWED
HYP-130CP2	Thread Connection for a Torch System	US	15/904,871	02/26/2018			PUBLISHED
HYP-130PR	Plasma Consumable Component	US	62/464,089	02/27/2017			EXPIRED
HYP-131	Plasma Arc Cutting System and Persona Selection Process	US	13/949,364	07/24/2013	9,481,050	11/01/2016	ISSUED
HYP-133	Methods for Developing Customer Loyalty Programs and Related Systems and Devices	US	14/219,665	03/19/2014			ABANDONED
HYP-133C1	Methods for Developing Customer Loyalty Programs and Related Systems and Devices	US	15/359,880	11/23/2016			PUBLISHED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-134	Apparatus and Method for Optimal Selection of Consumables in a Material Processing System	US	14/634,215	02/27/2015	9,817,411	11/14/2017	ISSUED
HYP-135	Cut Pattern Troubleshooting Overlay	US					INACTIVE
HYP-136	Systems and Methods for Configuring a Cutting or Welding Delivery Device	US	14/053,078	10/14/2013	9,643,273	05/09/2017	ISSUED
HYP-137	Automated Cartridge Detection for a Plasma Arc Cutting System	US	14/079,163	11/13/2013			ABANDONED
HYP-138C	Plasma Arc Torch Electrode with Symmetrical Plasma Gas Flow	US	14/040,517	09/27/2013	9,480,139	10/25/2016	ISSUED
HYP-138D	Apparatus and Method for Securing a Plasma Torch Electrode	US	14/040,572	09/27/2013	10,542,614	02/21/2020	ISSUED
HYP-138DC1	Apparatus and Method for Securing a Plasma Torch Electrode	US	16/564,686	09/09/2019			PENDING
HYP-138PR	Plasma Arc Torch Electrodes	US	61/847,844	07/18/2013			EXPIRED
HYP-139PR	NOZZLE	US					INACTIVE
HYP-140PR	SHIELD	US					INACTIVE
HYP-141A	Devices for Gas Cooling Plasma Arc Torches and Related Systems and Methods	US	14/090,392	11/26/2013	9,144,148	09/22/2015	ISSUED
HYP-141B	Devices for Gas Cooling Plasma Arc Torches and Related Systems and Methods	US	14/090,577	11/26/2013	9,326,367	04/26/2016	ISSUED
HYP-141C	Devices for Gas Cooling Plasma Arc Torches and Related Systems and Methods	US	14/091,016	11/26/2013			PUBLISHED

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HYP-141D	Devices for Gas Cooling Plasma Arc Torches and Related Systems and Methods	US	14/091,116	11/26/2013	8,698,036	04/15/2014	ISSUED
HYP-141PR	Plasma Arc Torch Nozzles, Shields and Retaining Caps Providing Plasma Gas to Plasma Arc Torches and Related Systems and Methods	US	61/858,235	07/25/2013			EXPIRED
HYP-143PR		US	61/877,702	09/13/2013			ABANDONED
HYP-144	Plasma Torch Electrode Materials and Related Systems and Methods	US	14/500,270	09/29/2014	9,516,738	12/06/2016	ISSUED
HYP-144PR	Plasma Torch Electrode Materials and Related Systems and Methods	US	61/884,712	09/30/2013			EXPIRED
HYP-145	ELECTRODE END OF LIFE PREDICTION	US					INACTIVE
HYP-146	Power Supply Assembly for a Plasma Arc Torch System	US	14/228,592	03/28/2014	9,550,251	01/24/2017	ISSUED
HYP-147PR	Diffuser Design in Hand Torch with Castellations	US	61/905,026	11/15/2013			EXPIRED
HYP-148-DES	Clamshell Container	US	29/473,537	11/22/2013	D735028	07/28/2015	ISSUED
HYP-150	Electrode Life by Simultaneously Controlling Plasma Gas Composition and Gas Flow	US	14/282,805	05/20/2014	9,642,237	05/02/2017	ISSUED
HYP-151PR	Plasma Torch Components and Related Systems and Methods	US	61/949,609	03/07/2014			EXPIRED
HYP-152	Water Injection and Venting of a Plasma Arc Torch	US	14/567,387	12/11/2014	10,149,376	12/04/2018	ISSUED
HYP-152DV	Water Injection and Venting of a Plasma Arc Torch	US	16/181,800	11/06/2018			PUBLISHED

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HYP-153	Semiconductor Based Power Supply Assemblies for Plasma Operating Systems and Related	US	14/675,520	03/31/2015	9,510,436	11/29/2016	ISSUED
HYP-153PR	Wide Bandgap Semiconductor Based Power Supply Assembly for a Plasma Operating System	US	61/972,601	03/31/2014			EXPIRED
HYP-154	Plasma Cutting System with Efficient Components	US	14/610,135	01/30/2015	9,908,195	03/06/2018	ISSUED
HYP-154CP	Cooling Plasma Cutting System Consumables and Related Systems and Methods	US	14/726,229	05/29/2015	9,967,964	05/08/2018	ISSUED
HYP-154CPCI	Cooling Plasma Cutting System Consumables and Related Systems and Methods	US	15/952,598	04/13/2018			PUBLISHED
HYP-154CPC2	Cooling Plasma Cutting System Consumables and Related Systems and Methods	US	16/510,242	07/12/2019			PUBLISHED
HYP-154PR	Material Processing System Power Supplies and Related Systems and Methods	US	62/005,526	05/30/2014			EXPIRED
HYP-155	Consumable Cartridge for a Plasma Arc Cutting System	US	14/708,972	05/11/2015	10,456,855	10/29/2019	ISSUED
HYP-155DI	Consumable Cartridge for a Plasma Arc Cutting System	US	16/677,420	09/20/2019			PENDING
HYP-155PR	Cartridge Type Consumable Assembly for a Plasma Arc Cutting System	US	61/991,114	05/09/2014			EXPIRED
HYP-155PX	Consumable Cartridge for a Plasma Arc Cutting System	US	14/708,957	05/11/2015	9,981,335	05/29/2018	ISSUED
HYP-155PXC1	Consumable Cartridge for a Plasma Arc Cutting System	US	15/971,703	05/04/2018			PUBLISHED
HYP-155PXC2	Consumable Cartridge for a Plasma Arc Cutting System	US	16/677,169	11/07/2019			PENDING

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-156	Cost Effective Cartridge for a Plasma Arc Torch	US	14/824,946	08/12/2015			ALLOWED
HYP-156C1	Cost Effective Cartridge for a Plasma Arc Torch	US	16/403,846	05/06/2019			PUBLISHED
HYP-156CP1	Cost Effective Cartridge for a Plasma Arc Torch	US	15/043,028	02/12/2016	10,321,551	06/11/2019	ISSUED
HYP-156CP1D1	Cost Effective Cartridge for a Plasma Arc Torch	US	16/413,071	05/15/2019			PUBLISHED
HYP-156CP2	Cost Effective Cartridge for a Plasma Arc Torch	US	15/043,044	02/12/2016	10,462,891	10/29/2019	ISSUED
HYP-156CP3	Cost Effective Cartridge for a Plasma Arc Torch	US	16/671,175	11/07/2019			PENDING
HYP-156PR	Cost Effective Cartridge for a Plasma Arc Torch	US	62/036,393	08/12/2014			EXPIRED
HYP-157PR	Method and Apparatus for Ultra-Low Current Plasma Gouging with Digital Control	US	62/002,304	05/23/2014			EXPIRED
HYP-158	Identifying Plasma Arc Torch Components and Related Systems and Methods	US	14/289,200	05/28/2014	9,630,272	04/25/2017	ISSUED
HYP-159	Cooling Plasma Torch Nozzles and Related Systems and Methods	US	15/176,989	06/08/2016	9,867,268	01/09/2018	ISSUED
HYP-159C1	Cooling Plasma Torch Nozzles and Related Systems and Methods	US	15/829,704	12/01/2017	10,299,363	05/21/2019	ISSUED
HYP-159PR	Cooling Plasma Torch Nozzles and Related Systems and Methods	US	62/172,589	06/08/2015			EXPIRED
HYP-160	Interchangeable Power Contact for a Plasma Arc Cutting System	US	14/887,591	10/20/2015	9,781,816	10/03/2017	ISSUED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-160PR	Interchangeable Power Contact for a Plasma Arc Cutting Torch	US	62/066,195	10/20/2014			EXPIRED
HYP-161A	Controlling Plasma Arc Torches and Related Systems and Methods	US	15/287,694	10/06/2016			ALLOWED
HYP-161B	Controlling Plasma Arc Torches and Related Systems and Methods	US	15/287,696	10/06/2016			PUBLISHED
HYP-161C	Controlling Plasma Arc Torches and Related Systems and Methods	US	15/287,698	10/06/2016			PUBLISHED
HYP-161PR	Controlling Plasma Arc Torches and Related Systems and Methods	US	62/237,780	10/06/2015			EXPIRED
HYP-162	WORKPIECE EDGE DETECTION USING PLASMA ARC CUTTING SYSTEM	US	15/173,537	06/03/2016	9,630,273	04/25/2017	ISSUED
HYP-162PR	Plate Edge Detection Using Plasma Arc Cutting (PAC) System	US	62/170,991	06/04/2015			EXPIRED
HYP-163PR	Plasma Cutting Nozzles with Integral Flow Dispersion and Related Systems and Methods	US	62/191,856	07/13/2015			EXPIRED
HYP-164A	Cartridge for a Liquid-Cooled Plasma Arc Torch	US	15/228,708	08/04/2016	10,278,274	04/30/2019	ISSUED
HYP-164B	Cartridge for a Liquid-Cooled Plasma Arc Torch	US	15/228,750	08/04/2016			ALLOWED
HYP-164C	Cartridge for a Liquid-Cooled Plasma Arc Torch	US	15/228,758	08/04/2016			ALLOWED
HYP-164D	Cartridge for a Liquid-Cooled Plasma Arc Torch	US	15/228,813	08/04/2016			ALLOWED
HYP-164PR	Liquid Cooled Cartridge	US	62/200,913	08/04/2015			EXPIRED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-165	Highly Positioned Laser Processing Nozzle	US	15/339,077	10/31/2016			ALLOWED
HYP-165CP	Highly Positioned Laser Processing Nozzle	US	15/647,147	07/11/2017			ALLOWED
HYP-165PR	Highly Positioned Laser Processing Nozzle	US	62/248,943	10/30/2015			EXPIRED
HYP-166	Water Cooling of Laser Components	US	15/339,070	10/31/2016	10,525,554	01/07/2020	ISSUED
HYP-166PR	Water Cooling of Laser Components	US	62/248,960	10/30/2015			EXPIRED
HYP-167-DES	Automated Controller	US	29/544,901	11/06/2015	D809027	01/30/2018	ISSUED
HYP-168	INTERNALLY ENERGIZED ELECTRODE OF A PLASMA ARC TORCH	US	15/386,297	12/21/2016			ALLOWED
HYP-168PR	Internally Energized Electrode	US	62/270,178	12/21/2015			EXPIRED
HYP-169	Supplying Pressurized Gas to Plasma Arc Torch Consumables and Related Systems and Methods	US	15/392,717	12/28/2016	10,413,991	09/17/2019	ISSUED
HYP-169PR	Nominal Input Pressure to Plasma Consumables and Plasma Gouging Consumables	US	62/272,154	12/29/2015			EXPIRED
HYP-170	Systems and Methods for Stabilizing Plasma Gas Flow in a Plasma Arc Torch	US	15/152,959	05/12/2016	9,820,371	11/14/2017	ISSUED
HYP-172PR	Metering Holes in the Shield Swirler	US	62/314,097	03/28/2016			EXPIRED
HYP-173	SYSTEMS AND METHODS FOR PLASMA GAS VENTING IN A PLASMA ARC TORCH	US	15/472,493	03/29/2017	10,245,674	04/02/2019	ISSUED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-173PR	Plasma Gas Venting Through a Short Path in Torch Body	US	62/314,658	03/29/2016			EXPIRED
HYP-174	Controlling and Delivering Gases in a Plasma Arc Torch and Related Systems and Methods	US	15/474,683	03/30/2017	10,279,417	05/07/2019	ISSUED
HYP-174D1	Controlling and Delivering Gases in a Plasma Arc Torch and Related Systems and Methods	US	16/351,349	03/12/2019			PUBLISHED
HYP-174D1C1	Controlling and Delivering Gases in a Plasma Arc Torch and Related Systems and Methods	US	16/573,651	09/17/2019			PENDING
HYP-174PR	Gas Switching and Venting Proximate a Plasma Arc Torch	US	62/315,331	03/30/2016			EXPIRED
HYP-175-DES	(Examiner's amendment changed title from Packaging for Mechanized	US	29/561,128	04/13/2016	D774901	12/27/2016	ISSUED
HYP-176-DES	Electrode Package (amended 01/20/17)	US	29/561,258	04/14/2016	D815519	04/17/2018	ISSUED
HYP-177BPR	RHFD Circuit Protection from Ignition Pulses	US	62/470,747	03/13/2017			ABANDONED
HYP-177PR	RHFD Circuit Protection from Ignition Pulses	US	62/316,955	04/01/2016			ABANDONED
HYP-178A	Plasma Arc Cutting System, Consumables and Operational Methods	US	15/471,351	03/28/2017	10,194,517	01/29/2019	ISSUED
HYP-178B	Plasma Arc Cutting Systems, Consumables and Operational Methods	US	15/228,702	08/04/2016	9,900,972	02/20/2018	ISSUED
HYP-178BPR	Metering Holes in the Shield Swirler	US	62/347,856	06/09/2016			EXPIRED
HYP-178C	Including Retaining Caps, and Other Consumables, and Related Operational Methods	US	15/484,196	04/11/2017	10,492,286	11/26/2019	ISSUED

Reference #	Title	City	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-178CCI	Including Retaining Caps, and Other Consumables, and Related Operational Methods	US	15/628,968	12/01/2017			PUBLISHED
HYP-178D	Plasma Arc Cutting System, Including Nozzles and Other Consumables, and Related Operational Methods	US	15/484,182	04/11/2017			PUBLISHED
HYP-178E	Including Coolant Tubes and Other Consumables, and Related Operational Methods	US	15/484,185	04/11/2017	10,129,969	11/13/2018	ISSUED
HYP-178F	Including Swirl Rings, and Other Consumables, and Related Operational Methods	US	15/484,187	04/11/2017			ALLOWED
HYP-178PR	Consumables for Plasma Arc Torch	US	62/520,935	04/11/2016			EXPIRED
HYP-179	Systems and Methods for Providing Power for Plasma Arc Cutting	US	15/486,257	04/12/2017			ALLOWED
HYP-179PR	Smart Choppers for Plasma Arc Systems	US	62/521,475	04/12/2016			EXPIRED
HYP-180	METHODS FOR WIRELESS COMMUNICATIONS BETWEEN	US	15/499,663	04/27/2017			PUBLISHED
HYP-180PR	Wireless Connectivity for a Plasma Arc Cutting System	US	62/528,515	04/27/2016			EXPIRED
HYP-181	Cooling Plasma Cutting Systems and Related Systems and Methods	US	15/584,848	05/02/2017			ALLOWED
HYP-181PR	Gas Circulation for a Plasma Arc Cutting System	US	62/530,387	05/02/2016			EXPIRED
HYP-182-DES	Power Supply	US	29/568,758	06/21/2016	D813161	03/20/2018	ISSUED
HYP-183	Controlling Plasma Arc Processing Systems and Related Systems and Devices	US	15/589,447	05/08/2017	10,539,942	01/21/2020	ISSUED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-183CI	ARC PROCESSING SYSTEMS AND RELATED SYSTEMS AND DEVICES	US	16696,576	11/26/2019			PENDING
HYP-183PR	Remote Control Plasma Cutting/Gauging System	US	62/332,624	05/06/2016			EXPIRED
HYP-185	Systems and Methods for Planning Paths to Guide Robots	US	15/627,730	06/20/2017			PUBLISHED
HYP-185PR	Graphical Planning of a Robot Path between Two Robot Postures in 3D Space	US	62/352,384	06/20/2016			EXPIRED
HYP-186-DES	Power Supply	US	29/569,614	06/29/2016	D815596	04/17/2018	ISSUED
HYP-187PR	Multiple Flow Grooved Highly Positioned Laser Processing Nozzle	US	62/360,908	07/11/2016			EXPIRED
HYP-188	LEAKS IN PRESSURIZED SYSTEMS OF WATERJET CUTTING SYSTEMS	US	15/676,587	08/14/2017			ALLOWED
HYP-188PR	Active Drip Detection Method for Waterjet Pressure Intensifiers	US	62/375,273	08/15/2016			EXPIRED
HYP-189PR	Rotationally Independent and Asymmetric Plasma Consumables	US	62/379,071	08/24/2016			EXPIRED
HYP-190A	Controlling Gas Flows to Plasma Arc Torches and Related Systems and Methods	US	15/686,926	08/25/2017			ALLOWED
HYP-190B	Processing Systems at Reduced Current and Gas Pressure Levels and Related Systems and Methods	US	15/686,939	08/25/2017			PUBLISHED
HYP-190PR	Gas Systems and Low Amperage Control	US	62/380,208	08/26/2016			EXPIRED
HYP-191BPR	Multi-Element Seal Carrier for a Liquid Jet Cutting System	US	62/557,404	09/12/2017			ABANDONED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-191PR	Multi-Element Seal Carrier for a Liquid Jet Cutting System	US	62/396,363	09/19/2016			EXPIRED
HYP-192BPR	Unibody Laser Cutting Head with Cam Actuated Focal Adjustment	US	62/571,376	10/12/2017			ABANDONED
HYP-192PR	Unibody Laser Cutting Head with Cam Actuated Focal Adjustment	US	62/408,385	10/14/2016			EXPIRED
HYP-193	Plasma Power Tool	US	15/790,671	10/23/2017			PUBLISHED
HYP-193PR	Plasma Power Tool	US	62/411,157	10/21/2016			EXPIRED
HYP-194PR	Wide Profile Gouging Consumables	US	62/430,108	12/05/2016			EXPIRED
HYP-195	ARC TORCHES AND RELATED SYSTEMS AND METHODS	US	15/845,711	12/18/2017			PUBLISHED
HYP-195PR	Lead Connection for a Plasma Arc System	US	62/436,203	12/19/2016			EXPIRED
HYP-196	Swirl Ring for a Plasma Arc Torch	US	15/852,240	12/22/2017			PUBLISHED
HYP-196PR	Staggered Core on Polymer Plasma Swirl Ring	US	62/438,538	12/23/2016			EXPIRED
HYP-197	DISABLING PLASMA ARC TORCHES AND RELATED SYSTEMS AND METHODS	US	15/870,001	01/12/2018			PUBLISHED
HYP-197PR	Torch Lock for a Plasma Arc Cutting System	US	62/446,058	01/13/2017			EXPIRED
HYP-198PR	Online Marketplace for Part Manufacturing	US	62/448,545	01/20/2017			EXPIRED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-199A	SWIRL RING AND CONTACT ELEMENT FOR A PLASMA ARC TORCH CARTRIDGE	US	15/892,678	02/09/2018	10,335,888	07/02/2019	ISSUED
HYP-199B	Swirl Ring and Contact Element for a Plasma Arc Torch Cartridge	US	15/892,687	02/09/2018			PUBLISHED
HYP-199PR	Moving Crown for Cartridge	US	62/456,813	02/09/2017			EXPIRED
HYP-200	Connecting Plasma Arc Torches and Related Systems and Methods	US	15/913,022	03/06/2018			PUBLISHED
HYP-200PR	Plasma Torch Head Quick Disconnect	US	62/468,172	03/07/2017			EXPIRED
HYP-201PR	Raw Plate Edge Detection	US	62/530,654	07/10/2017			ABANDONED
HYP-202	IMPLEMENTED METHODS AND SYSTEMS FOR GENERATING	US	16/031,981	07/10/2018			PUBLISHED
HYP-202PR	Automatic Path Planning	US	62/530,666	07/10/2017			EXPIRED
HYP-204PR	Improved Method of Plasma Torch Height Control	US	62/548,505	08/22/2017			EXPIRED
HYP-205	System and Method for Slag and Fume Management for Thermal Processes	US	16/109,074	08/22/2018			PUBLISHED
HYP-205PR	Improved Method for Slag and Fume Management for Thermal Processes	US	62/548,517	08/22/2017			EXPIRED
HYP-206BPR	Clocking Independent Internal Nozzle Cooling Features and Passages	US	62/752,702	10/30/2018			INACTIVE
HYP-206PR	Clocking Independent Internal Nozzle Cooling Features and Passages	US	62/579,568	10/31/2017			EXPIRED

Reference #	Title	Ctry	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-207PR	Gas Dilution Chamber	US	62/646,812	03/22/2018			ABANDONED
HYP-208	CONNECTOR IN A PLASMA ARC TORCH SYSTEM	US	16/567,432	09/11/2019			PENDING
HYP-208PR	Quick Disconnect Plasma Torch	US	62/729,540	09/11/2018			INACTIVE
HYP-209PR	Tailored Ramp Down	US	62/730,744	09/13/2018			ABANDONED
HYP-210	Mobile Waterjet Rail Repair System	US	16/672,799	09/17/2019			PENDING
HYP-210PR	Mobile Waterjet Rail Repair System	US	62/732,175	09/17/2018			EXPIRED
HYP-211	Augmented Reality in a Material Processing System	US	16/654,412	10/16/2019			PENDING
HYP-211PR	Augmented Reality in a Material Processing System	US	62/746,176	10/16/2018			EXPIRED
HYP-212	Automated Consumable Exchangers	US	16/668,795	10/30/2019			PENDING
HYP-212PR	Automated Consumable Changer for Plasma Cutters	US	62/752,606	10/30/2018			EXPIRED
HYP-213PR	Modular Communication Architecture	US	62/754,744	11/02/2018			INACTIVE
HYP-214PR	Plasma Torch Cartridge	US	62/756,996	11/07/2018			EXPIRED
HYP-215	SYSTEMS AND METHODS FOR MULTI-PATH GOUTING	US	16/688,605	11/19/2019			PENDING

Reference #	Title	City	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-215PR	SHAPE FITTING A MULTIPASS GOUGE	US	62/769,655	11/20/2018			EXPIRED
HYP-216PR	FLUID JET AGRICULTURAL SYSTEMS, DEVICES, AND METHODS	US	62/787,993	01/03/2019			PENDING
HYP-217PR	Plasma Fume Mitigation Devices and Systems	US	62/801,852	02/06/2019			INACTIVE
HYP-218PR	EXPERTISE DELIVERY VIA APIS FOR CUTTING PROCESSES AND SOLUTIONS	US	62/802,413	02/07/2019			PENDING
HYP-219PR	Motion Distribution in a Redundant Robotic System	US	62/803,714	02/11/2019			PENDING
HYP-220PR	LIQUID COOLED MINI-CARTRIDGE	US	62/807,879	02/20/2019			PENDING
HYP-221PR	Workpiece Determination System and Method	US	62/822,537	03/22/2019			PENDING
HYP-222PR	Plasma Torch Tip Gas Processing System	US	62/824,657	03/27/2019			PENDING
HYP-223PR	Adjustable Length Liquid-Cooled Plasma Consumables	US	62/829,080	04/04/2019			PENDING
HYP-224PR	Annular Laser Nozzle Geometries for Improved Laser Cutting	US	62/852,098	05/23/2019			PENDING
HYP-225-DES	Single package	US	29/697,022	07/03/2019			PENDING
HYP-226-DES	FIVE-PACK PACKAGE	US	29/697,024	07/03/2019			PENDING
HYP-227PR	Coil Antennae Extender for RFID Tags in Plasma Torch Consumables	US	62/864,706	06/21/2019			PENDING

Reference #	Title	City	Serial #	Filed Date	Patent #	Issue Date	Status
HYP-228PR	Quick Connect Locking Mechanism for an Industrial Cutting System	US	62/866,249	06/25/2019			PENDING
HYP-229PR	Multifunctional Cartridge Jacket	US	62/875,739	07/18/2019			PENDING
HYP-230PR	A Method to Reduce Steel Scrap for Plasma Cutting	US	62/883,583	08/06/2019			PENDING
HYP-231-DES	Cartridge for a Plasma Cutting Torch	US	29/717,256	12/16/2019			PENDING
HYP-232PR	Pressurized Flow Separation of Consumables in a Plasma Arc Cutting Torch	US	62/937,537	11/19/2019			PENDING
HYP-233PR	Acoustic Analysis of Material Processing Systems	US	62/937,564	11/19/2019			PENDING
HYP-234PR	Reduce Damage to Process Critical Geometric Features During Contact Start Ignition	US	62/940,039	11/25/2019			PENDING
HYP-235PR	Self-Locking Interference Design of a Laser Nozzle	US	62/941,035	11/27/2019			PENDING
HYP-GENERALIP	GENERAL IP	US					PROPOSED
	CYLINDER FOR A LIQUID JET PUMP WITH MULTIFUNCTIONAL INTERFACING	US	17/216194	2021-03-29	US20210299904A1		PENDING
	FREEEY CLOCKING CHECK VALVE	US	17/213043	2021-03-25	US20210301936A1		PENDING
	HIGH-PRESSURE SEAL FOR A LIQUID JET CUTTING SYSTEM	US	17/210068	2021-03-23	US20210299903A1		PENDING
	GENERATING OPTIMIZED TOOL PATHS AND MACHINE COMMANDS FOR BEAM	US	17/207515	2021-03-19	US20210231534A1		PENDING

Reference #	Title	City	Serial #	Filed Date	Patent #	Issue Date	Status
	Systems and Methods for Determining Characteristics of a Workpiece in a Plasma Arc Processing System	US	17/205821	2021-03-18	US20210291290A1		PENDING
	HIGH PRESSURE LIQUID-JET SEAL ASSEMBLY CARRIAGE	US	17/203132	2021-03-16	US20210291332A1		PENDING
	Cathode Sealed Liquid Coolant Tube for a Plasma Arc Cutting System	US	17/203610	2021-03-16	US20210283709A1		PENDING
	Consumable Cartridge For A Plasma Arc Cutting System	US	17/164106	2021-02-01	US20210178505A1		PENDING
	Swift Ring and Contact Element for a Plasma Arc Torch Cartridge	US	17/146090	2021-01-11	US20210136905A1		PENDING
	NOZZLES FOR LIQUID COOLED PLASMA ARC CUTTING TORCHES WITH CLOCC KING-MOTORIZED SYSTEMS AND ASSOCIATED METHODS FOR CONTROLLING AN	US	17/144845	2021-01-08	US20210219412A1		PENDING
	LIQUID JET CUTTING HEAD SENSOR SYSTEMS AND METHODS	US	17/125819	2020-12-17	US20210192927A1		PENDING
	CONSUMABLE DESIGNS FOR A PLASMA ARC TORCH	US	16/952952	2020-11-19	US20210153334A1		PENDING
	Systems and Methods for Separating Consumables Under Pressure in a Plasma Arc Torch	US	16/952806	2020-11-19	US20210146468A1		PENDING
	Connecting Plasma Arc Torches and Related Systems and Methods	US	17/080089	2020-10-26	US20210045224A1		PENDING
	Cost Effective Cartridge for a Plasma Arc Torch	US	17/036921	2020-09-29	US20210029814A1		PENDING
	METHOD AND APPARATUS FOR MONITORING PARTICLE LOADED PNEUMATIC	US	17/023227	2020-09-16	US20200406424A1		PENDING

Reference #	Title	City	Serial #	Filed Date	Patent #	Issue Date	Status
	MEASURING ABRASIVE FLOW RATES IN A CONDUIT	US	16/942539	2020-07-29	US20210046610A1		PENDING
	Locking Mechanisms in a Material Processing System	US	16/911917	2020-06-25	US20200406396A1		PENDING
	Computer-implemented methods and systems for generating material processing robotic tool	US	16/909512	2020-06-23	US20200316776A US10933529B2	2021-03-02	PENDING
	Configuring signal devices in thermal processing systems	US	16/892736	2020-06-04	US20200293727A1 US11087100B2	2021-08-10	PENDING
	ADJUSTABLE LENGTH CONSUMABLES FOR A LIQUID-COOLED PLASMA ARC TORCH	US	16/840973	2020-04-06	US20200323075A1		PENDING
	Cartridge for a Liquid-Cooled Plasma Arc Torch	US	16/795752	2020-02-20	US20200196476A1		PENDING
	Motion Distribution in Robotic Systems	US	16/787418	2020-02-11	US20200254612A1		PENDING
	Systems and Methods for Cloud-Based Expertise Delivery via APIs	US	16/783027	2020-02-07	US20200257264A1		PENDING
	Highly Positioned Laser Processing Nozzle	US	16/742699	2020-01-14	US20200198057A1		PENDING
	Controlling Plasma Arc Torches and Related Systems and Methods	US	16/737574	2020-01-08	US20200139479A1		PENDING
	Fluid Jet Agricultural Devices, Systems and Methods	US	16/733764	2020-03-01	US20200217044A1		PENDING

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