

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5151104

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST
CONVEYING PARTY DATA	
Name	Execution Date
PERMA-PIPE CANADA LTD.	09/20/2018
PERMA-PIPE CANADA, INC.	09/20/2018
PERMA-PIPE INTERNATIONAL HOLDINGS, INC.	09/20/2018
PERMA-PIPE, INC.	09/20/2018
RECEIVING PARTY DATA	
Name:	PNC BANK, NATIONAL ASSOCIATION
Street Address:	500 FIRST AVENUE
Internal Address:	COMMERCIAL LOAN SERVICE CENTER/DCC
City:	PITTSBURGH
State/Country:	PENNSYLVANIA
Postal Code:	15219
PROPERTY NUMBERS Total: 4	
Property Type	Number
Patent Number:	8049638
Patent Number:	9145999
Patent Number:	7525444
Patent Number:	7824595
CORRESPONDENCE DATA	
Fax Number:	(215)832-5619
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
Phone:	2155695619
Email:	pecsenye@blankrome.com
Correspondent Name:	TIMOTHY D. PECSENYE
Address Line 1:	ONE LOGAN SQUARE
Address Line 2:	8TH FLOOR
Address Line 4:	PHILADELPHIA, PENNSYLVANIA 19103
ATTORNEY DOCKET NUMBER:	074658-18062
NAME OF SUBMITTER:	TIMOTHY D. PECSENYE
SIGNATURE:	/Timothy D. Pecsénye/

PATENT

DATE SIGNED:	09/20/2018
Total Attachments: 16 source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page1.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page2.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page3.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page4.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page5.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page6.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page7.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page8.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page9.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page10.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page11.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page12.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page13.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page14.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page15.tif source=Intellectual Property Security Agreement (PNC Perma-Pipe)#page16.tif	

INTELLECTUAL PROPERTY SECURITY AGREEMENT

This INTELLECTUAL PROPERTY SECURITY AGREEMENT (this “Agreement”), dated as of September 20, 2018, is made by and among PERMA-PIPE INTERNATIONAL HOLDINGS, INC., a Delaware corporation (“Holdings”), PERMA-PIPE, INC., a Delaware corporation (“Perma-Pipe”), PERMA-PIPE CANADA LTD., a company registered in the Province of Alberta, Canada (“Perma-Pipe Canada”), PERMA-PIPE CANADA, INC., a Delaware corporation (“Canada Holdings” and together with Holdings, Perma-Pipe, Perma-Pipe Canada and each Person joined to the Credit Agreement (defined below) as a borrower or guarantor from time to time, collectively, the “Grantors” and each, a “Grantor”), in favor of PNC BANK, NATIONAL ASSOCIATION, in its capacity as “Agent” under the Credit Agreement (together with its successors and assigns in such capacity, including any replacement or successor “Agent” appointed under the Credit Agreement, the “Agent”).

W I T N E S S E T H:

WHEREAS, pursuant to that certain Revolving Credit and Security Agreement, dated of even date herewith, by and among the Agent, the various financial institutions named therein or which hereafter become a party thereto as lenders (collectively, the “Lenders”), the Grantors and each other Person hereafter joined thereto as a borrower or guarantor from time to time (as amended, restated, amended and restated, modified, supplemented, renewed or replaced from time to time, the “Credit Agreement”; capitalized terms used herein but not otherwise defined herein shall have the meanings given to such terms in the Credit Agreement), Agent and Lenders have made and/or will in the future make certain extensions of credit to the Grantors upon the terms and subject to the conditions set forth in the Credit Agreement;

WHEREAS, pursuant to the Credit Agreement, Grantors have granted to Agent, for its own benefit and for the ratable benefit of the Secured Parties, security interests in and liens upon substantially all of each Grantor’s assets, including without limitation all of each Grantor’s Intellectual Property and specifically including all of each Grantor’s registered United States patents, trademarks and copyrights and all of each Grantor’s filed United States patent applications, trademark applications and copyright applications, all whether now owned or hereafter created, arising and/or acquired except for any of the forgoing that are considered Excluded Property (collectively, the “Intellectual Property Collateral” as hereinafter further defined); and

WHEREAS, Grantors have agreed to execute and deliver this Agreement, and to have a copy of this Agreement filed with the United States Patent and Trademark Office and/or the United States Copyright Office (as applicable), in order to perfect and/or protect all of Agent’s security interest in and liens upon the Intellectual Property Collateral;

NOW, THEREFORE, in consideration of the premises and mutual covenants and agreements provided for herein and in the Credit Agreement, and for other good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged by each party hereto, and intending to be legally bound, the parties hereto agree as follows:

Section 1. Grant of Security Interest in Intellectual Property Collateral. Without limiting any other grant of any lien by any Grantor in any Collateral under the Credit Agreement or any Other Document, to secure the prompt payment and performance of all Obligations to Agent and the other Secured Parties, each Grantor hereby collaterally assigns, pledges and grants to Agent, for its benefit and for the ratable benefit of the other Secured Parties, a continuing security interest in and lien upon all of such Grantor's right, title and interest in, to and under the following Collateral (excluding Excluded Property) of such Grantor, all whether now owned and/or existing or hereafter created, arising and/or acquired (the "Intellectual Property Collateral"):

(a) all of its registered/issued United States patents and filed United States patent applications, including, without limitation, those referred to on Schedule 1 hereto or on any Schedule to any Supplement (as defined below) delivered hereafter, together with all reissues, reexaminations, continuations, continuations-in-part, divisionals, renewals and extensions of the foregoing;

(b) all of its registered United States trademarks and filed United States trademark applications, including, without limitation, those referred to on Schedule 1 hereto or on any Schedule to any Supplement delivered hereafter, together with all renewals, reversions and extensions of the foregoing;

(c) all goodwill of the business connected with the use of, and symbolized by, each such trademark and trademark application covered by clause (b) above;

(d) all of its registered United States copyrights and filed United States copyright applications, including, without limitation, those referred to on Schedule 1 hereto or on any Schedule to any Supplement delivered hereafter, together with all renewals, reversions and extensions of the foregoing;

(e) all applications, registrations, claims, awards, judgments, amendments, improvements and insurance claims related to the collateral described in preceding clauses (a) through (d) now or hereafter owned or licensed by any Grantor, or any claims for damages by way of any past, present, or future infringement of any of the foregoing, together with all accessions and additions thereto and proceeds thereof (including, without limitation, any proceeds resulting under insurance policies); and

(f) all cash, income, royalties, fees, other proceeds, Receivables, accounts and general intangibles that consist of rights of payment to or on behalf of any Grantor relating to the collateral described in preceding clauses (a) through (e), proceeds from the sale, licensing or other disposition of all or any part of, or rights in, the Intellectual Property Collateral by or on behalf of any Grantor, and all rights to sue and recover at law or in equity for any past, present and future infringement, misappropriation, dilution, violation or other impairment thereof;

which such continuing security interest in and lien upon the Intellectual Property Collateral, and this Agreement, shall continue in full force and effect to secure each of the Obligations unless and until the Obligations have been Paid in Full and all Commitments under the Credit Agreement have been terminated.

Section 2. Credit Agreement. The security interests and liens granted pursuant to this Agreement are granted in conjunction with, and in no way limit, the security interests and liens granted to the Agent pursuant to the Credit Agreement and/or any of the Other Documents, and each Grantor hereby acknowledges and agrees that the rights and remedies of the Agent with respect to the security interests in and liens upon the Intellectual Property Collateral made and granted hereby are more fully set forth in the Credit Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein.

Section 3. Registration/Filing. This Agreement is intended by the parties to be filed, and each Grantor hereby authorizes Agent to file and record a copy of this Agreement, with the United States Patent and Trademark Office and/or United States Copyright Office, as applicable.

Section 4. Grantors Remains Liable. Each Grantor hereby agrees that, anything herein to the contrary notwithstanding, such Grantor shall retain full and complete responsibility for the prosecution, defense, enforcement or any other necessary or desirable actions in connection with the Intellectual Property Collateral subject to a security interest hereunder.

Section 5. Agreement to Deliver Supplements. Each Grantor hereby covenants and agrees that promptly upon the acquisition by such Grantor of any new Intellectual Property Collateral, Grantors shall, concurrently with the next scheduled delivery of a Compliance Certificate under Section 9.7 or 9.9 of the Credit Agreement following acquisition of such new Intellectual Property Collateral, deliver to Agent a duly executed Supplement to this Agreement in the form of Exhibit A hereto (a "Supplement"), listing all such newly acquired Intellectual Property Collateral on Schedule I thereto, pursuant to which Grantors shall reconfirm the grant of a security interest in such newly acquired Intellectual Property Collateral to Agent, for its benefit and for the ratable benefit of the other Secured Parties, to secure the Obligations. Each Supplement is intended by the parties to be filed, and Grantors hereby authorize Agent to file and record a copy of each Supplement, with the United States Patent and Trademark Office and/or United States Copyright Office, as applicable. Regardless of whether any Supplement is delivered by Grantors, and without limiting the generality of the provisions of Section 1 hereof above, Grantors hereby confirm and agree that any and all such after-acquired Intellectual Property Collateral shall immediately and automatically upon any Grantor's acquisition of any right, title and interest therein become part of the Intellectual Property Collateral hereunder. In the event that any Grantor acquires any such new Intellectual Property Collateral but Grantors fail for whatever reason to promptly execute and deliver a Supplement to Agent pursuant to this Section 5, each Grantor hereby authorizes Agent, acting under its Power of Attorney granted pursuant to Section 8 below, to at any time thereafter execute in the name of such Grantor an applicable Supplement with respect to such newly acquired Intellectual Property Collateral and to file the same with the United States Patent and Trademark Office and/or United States Copyright Office, as applicable.

Section 6. Representation and Warranties. Grantors hereby represent and warrant to Agent and to the other Secured Parties that Schedule 1 sets forth a full, complete and correct list of all Intellectual Property Collateral registerable with the United States Patent and Trademark Office and the United States Copyright Office owned by Grantors as of the date hereof.

Section 7. Events of Default and Remedies. The occurrence of an Event of Default under the Credit Agreement shall constitute an "Event of Default" under this Agreement. Upon the

occurrence of and during the continuance of an Event of Default, in addition to all other rights, options, and remedies granted to Agent under the Credit Agreement or any of the Other Documents or otherwise available to Agent as a secured creditor at law or in equity, Agent may exercise, either directly or through one or more assignees or designees, all rights and remedies granted to it as a secured creditor under the Uniform Commercial Code with respect to the Intellectual Property Collateral.

Section 8. Power of Attorney. Without limiting the generality of any power of attorney granted to Agent under the Credit Agreement or any Other Document, each Grantor hereby authorizes Agent, its successors and assigns, and any officer, employee, attorney or agent thereof, as such Grantor's true and lawful attorney-in-fact, with the power (a) to execute and endorse on behalf of and in the name of such Grantor any Supplement to this Agreement or other security agreement or similar document or instrument which Agent may in its Permitted Discretion deem necessary or desirable in order to create, protect, perfect or enforce the security interest provided for herein in the Intellectual Property Collateral and in each case to file or record any such Supplement or other security agreement or similar document or instrument with the United States Patent and Trademark Office and/or the United States Copyright Office, as applicable, in the name of and on behalf of such Grantor, and (b) after the occurrence and during the continuance of an Event of Default, to execute and endorse on behalf of and in the name of such Grantor any assignment, bill of sale or similar document or instrument which Agent may deem necessary or desirable in order for Agent to assign, pledge, convey or otherwise sell, transfer title in or dispose of the Intellectual Property Collateral, and in each case to file or record with the United States Patent and Trademark Office and/or the United States Copyright Officer, as applicable, in the name of and on behalf of such Grantor any such assignment or bill of sale or other document executed by Agent, its successors and assigns, and any officer, employee, attorney or Agent thereof under this power of attorney. Each Grantor hereby unconditionally ratifies all that any person authorized under this power of attorney shall lawfully do or cause to be done by virtue hereof and in accordance with the terms of hereof and of the Credit Agreement and the other Loan Documents. This power of attorney is coupled with an interest and is and shall be irrevocable unless and until all of the Obligations (including any obligations to provide cash collateral for any Letters of Credit) have been Paid in Full and all of the Commitments under the Credit Agreement have been terminated.

Section 9. Miscellaneous. This Agreement, and all matters relating hereto or arising herefrom (whether arising under contract law, tort law or otherwise) shall, in accordance with Section 5-1401 of the General Obligations Law of the State of New York, be governed by and construed in accordance with the laws of the State of New York. Without limiting the generality of the general incorporation of the Credit Agreement herein provided for above, the provisions of Section 16.2 of the Credit Agreement {Entire Understanding}, Section 16.5 of the Credit Agreement {Indemnity}, Section 16.6 of the Credit Agreement {Notice}, Section 16.9 of the Credit Agreement {Expenses} and Article XII of the Credit Agreement {Waivers and Judicial Proceedings} are hereby specifically incorporated by reference. If any part of this Agreement is contrary to, prohibited by, or deemed invalid under Applicable Laws or regulations, such provision shall be inapplicable and deemed omitted to the extent so contrary, prohibited or invalid, but the remainder hereof shall not be invalidated thereby and shall be given effect so far as possible. This Agreement shall be binding upon and inure to the benefit of Grantors and Agent, and their respective successors and assigns, except that no Grantor may assign or transfer any of its rights

or obligations under this Agreement without the prior written consent of Agent. This Agreement may be executed in counterparts, each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Any signature delivered by a party by facsimile or other electronic means of transmission (including email transmission of a PDF copy) shall be deemed to be an original signature hereto.

[Signature Pages Follow]

In witness whereof, each Grantor has caused this Intellectual Property Security Agreement to be executed and delivered by its duly authorized officer as of the date first set forth above.

GRANTORS:

PERMA-PIPE INTERNATIONAL HOLDINGS,
INC.

By: Karl J. Schmidt
Name: Karl J. Schmidt
Title: Chief Financial Officer

PERMA-PIPE, INC.

By: Karl J. Schmidt
Name: Karl J. Schmidt
Title: Chief Financial Officer

PERMA-PIPE CANADA LTD.

By: Karl Schmidt
Name: Karl Schmidt
Title: Treasurer

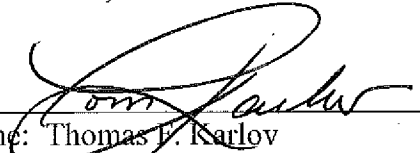
PERMA-PIPE CANADA, INC.

By: Karl J. Schmidt
Name: Karl J. Schmidt
Title: Chief Financial Officer

Signature Page to Intellectual Property Security Agreement

ACCEPTED AND AGREED
as of the date first above written:

PNC BANK, NATIONAL ASSOCIATION, as Agent

By: 
Name: Thomas F. Karlov
Title: Senior Vice President

Signature Page to Intellectual Property Security Agreement

PATENT
REEL: 046930 FRAME: 0847

Schedule 1
to
Intellectual Property Security Agreement

COPYRIGHTS: The following is a list of all copyrights and copyright applications owned by each Grantor:

Loan Party	Copyright/Application Number	Description	Jurisdiction
Perma-Pipe, Inc.	TXu000129776	Escon-A Installation Manual	United States

PATENTS: The following is a list of all patents and patent applications owned by each Grantor:

Grantor	Patent/Application Number	Description	Jurisdiction
Perma-Pipe, Inc.	8,049,638	Sensor for detecting hydrocarbons	United States
Perma-Pipe, Inc.	9,145,999	Shear increasing system	United States
Perma-Pipe, Inc.	7,525,444	Sensor for Detecting Hydrocarbons	United States
Perma-Pipe, Inc.	7,824,595	Method and system for cast molding a fluid conduit	United States
Perma-Pipe, Inc.	GC0003445	Shear Increasing System	Gulf Cooperation Council
Perma-Pipe, Inc.	6469/DELNP/2010	Shear Increasing System	India

TRADEMARKS: The following is a list of all trademarks and trademark applications owned by each Grantor:

Grantor	Trademark/Application Number	Description	Jurisdiction
Perma-Pipe, Inc.	2220733	LIQUIDWATCH	United States
Perma-Pipe, Inc.	1743871	FLUIDWATCH	United States
Perma-Pipe, Inc.	1673827	PAL-AT	United States
Perma-Pipe, Inc.	2967475	XTRU-THERM	United States
Perma-Pipe, Inc.	900031	CHIL-GARD	United States
Perma-Pipe, Inc.	1715736	DOUBLE QUIK	United States
Perma-Pipe, Inc.	1648496	PALCOM	United States
Perma-Pipe, Inc.	2361072	ESCON-A	United States
Perma-Pipe, Inc.	829336	PERMA-PIPE	United States
Perma-Pipe, Inc.	3313022	ULTRA-THERM	United States
Perma-Pipe, Inc.	2294963	POLYTHERM	United States
Perma-Pipe, Inc.	1112219	STEREO-HEAT	United States

Perma-Pipe, Inc.	871600	GALVA-GARD	United States
Perma-Pipe, Inc.	3405832	PEX-GARD	United States
Perma-Pipe, Inc.	3643252	MULTI-THERM	United States
Perma-Pipe, Inc.	4529925	CRYO-GARD	United States
Perma-Pipe, Inc.	4529926	CRYO-GARD	United States
Perma-Pipe, Inc.	4240522	SLEEVE-GARD	United States
Perma-Pipe, Inc.	4455524	ELECTRO-GARD	United States
Perma-Pipe, Inc.	3345301	AUTO-THERM	United States
Perma-Pipe, Inc.	3313701	AUTO-THERM	United States
Perma-Pipe, Inc.	5151414	SULPHUR-THERM	United States
Perma-Pipe, Inc.	876161	Perma-Pipe	United Kingdom
Perma-Pipe, Inc.	983102	Poly-Therm	United Kingdom
Perma-Pipe, Inc.	983103	POLY-THERM	United Kingdom
Perma-Pipe, Inc.	899117	RIC-WIL	United Kingdom
Perma-Pipe, Inc.	971844	Poly-Therm	United Kingdom
Perma-Pipe, Inc.	VR 1973 00817	RIC-WIL	Denmark
Perma-Pipe, Inc.	1436576	PERMA-PIPE	France
Perma-Pipe, Inc.	1232157	PERMA-PIPE	France
Perma-Pipe, Inc.	TMA809885	PERMA-PIPE	Canada
Perma-Pipe, Inc.	TMA160352	RIC-WIL	Canada
Perma-Pipe, Inc.	TMA823128	PAL-AT	Canada
Perma-Pipe, Inc.	TMA858189	SLEEVE-GARD	Canada
Perma-Pipe, Inc.	TMA907372	ELECTRO-GARD	Canada
Perma-Pipe, Inc.	TMA980339	SULPHUR-THERM	Canada
Perma-Pipe, Inc.	940758	PERMA-PIPE	Germany
Perma-Pipe, Inc.	1625025	PERMA-PIPE	India
Perma-Pipe, Inc.	1625028	XTRU-THERM	India
Perma-Pipe, Inc.	1625029	PAL-AT	India
Perma-Pipe, Inc.	2075732	CRYO-GARD	India
Perma-Pipe, Inc.	2253188	SLEEVE-GARD	India
Perma-Pipe, Inc.	2253189	ELECTRO-GARD	India
Perma-Pipe, Inc.	2586261	SULPHUR-THERM	India
Perma-Pipe, Inc.	146766; 146767	PERMA-PIPE	United Arab Emirates
Perma-Pipe, Inc.	146768; 146769	XTRU-THERM	United Arab Emirates
Perma-Pipe, Inc.	146770	PAL-AT	United Arab Emirates
Perma-Pipe, Inc.	158498	CRYO-GARD	United Arab Emirates
Perma-Pipe, Inc.	158499	CRYO-GARD	United Arab Emirates
Perma-Pipe, Inc.	168000	SLEEVE-GARD	United Arab Emirates
Perma-Pipe, Inc.	167999	ELECTRO-GARD	United Arab Emirates
Perma-Pipe, Inc.	196632	SULPHUR-THERM	UAE
Perma-Pipe, Inc.	49294, 49295	PERMA-PIPE	Oman
Perma-Pipe, Inc.	49296, 49297	XTRU-THERM	Oman

Perma-Pipe, Inc.	49298	PAL-AT	Oman
Perma-Pipe, Inc.	68971	CRYO-GARD	Oman
Perma-Pipe, Inc.	68972	CRYO-GARD	Oman
Perma-Pipe, Inc.	72849	SLEEVE-GARD	Oman
Perma-Pipe, Inc.	72848	ELECTRO-GARD	Oman
Perma-Pipe, Inc.	50278; 50279	PERMA-PIPE	Qatar
Perma-Pipe, Inc.	50280, 50281	XTRU-THERM	Qatar
Perma-Pipe, Inc.	50282	PAL-AT	Qatar
Perma-Pipe, Inc.	68881	CRYO-GARD	Qatar
Perma-Pipe, Inc.	68882	CRYO-GARD	Qatar
Perma-Pipe, Inc.	72937	SLEEVE-GARD	Qatar
Perma-Pipe, Inc.	72938	ELECTRO-GARD	Qatar
Perma-Pipe, Inc.	77235, 77236	PERMA-PIPE	Kuwait
Perma-Pipe, Inc.	77237, 77238	XTRU-THERM	Kuwait
Perma-Pipe, Inc.	106905	CRYO-GARD	Kuwait
Perma-Pipe, Inc.	106906	CRYO-GARD	Kuwait
Perma-Pipe, Inc.	77239	PAL-AT	Kuwait
Perma-Pipe, Inc.	108159	SLEEVE-GARD	Kuwait
Perma-Pipe, Inc.	108158	ELECTRO-GARD	Kuwait
Perma-Pipe, Inc.	64735, 64736	PERMA-PIPE	Bahrain
Perma-Pipe, Inc.	64737, 64738	XTRU-THERM	Bahrain
Perma-Pipe, Inc.	64739	PAL-AT	Bahrain
Perma-Pipe, Inc.	87174	CRYO-GARD	Bahrain
Perma-Pipe, Inc.	87175	CRYO-GARD	Bahrain
Perma-Pipe, Inc.	90765	SLEEVE-GARD	Bahrain
Perma-Pipe, Inc.	90764	ELECTRO-GARD	Bahrain
Perma-Pipe, Inc.	1321/79	PERMA-PIPE	Saudi Arabia
Perma-Pipe, Inc.	142903893 (1153/10)	PERMA-PIPE	Saudi Arabia
Perma-Pipe, Inc.	142903895 (1106/95); 142903894 (1106/96)	XTRU-THERM	Saudi Arabia
Perma-Pipe, Inc.	1319/45	PERMALERT	Saudi Arabia
Perma-Pipe, Inc.	169592	CRYO-GARD	Saudi Arabia
Perma-Pipe, Inc.	169593	CRYO-GARD	Saudi Arabia
Perma-Pipe, Inc.	143302886	SLEEVE-GARD	Saudi Arabia
Perma-Pipe, Inc.	1434/85	ELECTRO-GARD	Saudi Arabia
Perma-Pipe, Inc.	143413512	SULPHUR-THERM	Saudi Arabia
Perma-Pipe, Inc.	T0910201C; T0910203Z	PERMA-PIPE	Singapore
Perma-Pipe, Inc.	T0910202A; T0910204H	XTRU-THERM	Singapore
Perma-Pipe, Inc.	T0910199H	PAL-AT	Singapore
Perma-Pipe, Inc.	1333770	RIC-WIL	Australia
Perma-Pipe, Inc.	1405202	PAL-AT	Australia
Perma-Pipe, Inc.	1415701	CRYO-GARD	Australia
Perma-Pipe, Inc.	301526607	PERMA-PIPE	Hong Kong
Perma-Pipe, Inc.	301525662	XTRU-THERM	Hong Kong
Perma-Pipe, Inc.	301525671	PAL-AT	Hong Kong
Perma-Pipe, Inc.	301525680	RIC-WIL	Hong Kong
Perma-Pipe, Inc.	TM336349; TM339607	PERMA-PIPE	Thailand
Perma-Pipe, Inc.	TM339445; TM344993	XTRU-THERM	Thailand
Perma-Pipe, Inc.	TM335433	PAL-AT	Thailand

Perma-Pipe, Inc.	TM339606	POLYTHERM	Thailand
Perma-Pipe, Inc.	8110977	PERMA-PIPE	China
Perma-Pipe, Inc.	8111282	PAL-AT	China
Perma-Pipe, Inc.	10580650	SLEEVE-GARD	China
Perma-Pipe, Inc.	40-0922658	PERMA-PIPE	South Korea
Perma-Pipe, Inc.	40-1033627	PERMA-PIPE	South Korea
Perma-Pipe, Inc.	40-0958927	PAL-AT	South Korea
Perma-Pipe, Inc.	1463886	PERMA-PIPE	Taiwan
Perma-Pipe, Inc.	1488180	PERMA-PIPE	Taiwan
Perma-Pipe, Inc.	1517090	PAL-AT	Taiwan
Perma-Pipe, Inc.	1468435	POLYTHERM	Taiwan
Perma-Pipe, Inc.	9569708	PERMA-PIPE	European Union
Perma-Pipe, Inc.	9569625	PAL-AT	European Union
Perma-Pipe, Inc.	10711257	SLEEVE-GARD	European Union
Perma-Pipe, Inc.	10711299	ELECTRO-GARD	European Union
Perma-Pipe, Inc.	1214105	PAL-AT	Mexico
Perma-Pipe, Inc.	1214106	PERMALERT	Mexico
Perma-Pipe, Inc.	938.598	PAL-AT	Chile
Perma-Pipe, Inc.	256714	PAL-AT	Egypt
Perma-Pipe, Inc.	2499212	PAL-AT	Argentina
Perma-Pipe, Inc.	903 368 927	PERMA-PIPE	Brazil
Perma-Pipe, Inc.	903 368 889	PERMA-PIPE	Brazil
Perma-Pipe, Inc.	903 369 214	AUTO-THERM	Brazil
Perma-Pipe, Inc.	903 369 400	AUTO-THERM	Brazil
Perma-Pipe, Inc.	903 369 087	PAL-AT	Brazil
Perma-Pipe, Inc.	2011002750	PERMA-PIPE	Malaysia
Perma-Pipe, Inc.	2011002751	PERMA-PIPE	Malaysia
Perma-Pipe, Inc.	2011002752	XTRU-THERM	Malaysia
Perma-Pipe, Inc.	2011002754	XTRU-THERM	Malaysia
Perma-Pipe, Inc.	2011002753	PAL-AT	Malaysia
Perma-Pipe, Inc.	491625	PERMA-PIPE	Colombia
Perma-Pipe, Inc.	495085	PERMA-PIPE	Colombia
Perma-Pipe, Inc.	496481	XTRU-THERM	Colombia
Perma-Pipe, Inc.	496482	XTRU-THERM	Colombia
Perma-Pipe, Inc.	499198	HI-GARD	Colombia
Perma-Pipe Canada Ltd.	TMA366,621	ULTRABOND	Canada

EXHIBIT A

SUPPLEMENT TO INTELLECTUAL PROPERTY SECURITY AGREEMENT

THIS SUPPLEMENT TO INTELLECTUAL PROPERTY SECURITY AGREEMENT (the "Supplement") made as of this ___ day of _____, 20___, by and among PERMA-PIPE INTERNATIONAL HOLDINGS, INC., a Delaware corporation ("Holdings"), PERMA-PIPE, INC., a Delaware corporation ("Perma-Pipe"), PERMA-PIPE CANADA, LTD., ("Perma-Pipe Canada"), PERMA-PIPE CANADA, INC., a Delaware corporation ("Canada Holdings") and together with Holdings, Perma-Pipe, Perma-Pipe Canada and each Person joined to the Credit Agreement as a borrower or guarantor from time to time, collectively, the "Grantors" and each, a "Grantor", in favor of PNC BANK, NATIONAL ASSOCIATION, in its capacity as "Agent" under the Credit Agreement (together with its successors and assigns in such capacity, including any replacement or successor "Agent" appointed under the Credit Agreement, the "Agent"):

W I T N E S S E T H:

WHEREAS, Grantors and Agent are parties to a certain Intellectual Property Security Agreement, dated as of September 20, 2018 (as amended, restated, amended and restated, modified, supplemented, renewed or replaced from time to time, the "IP Security Agreement"). Capitalized terms used herein but not otherwise defined herein shall have the meanings given to such terms in the IP Security Agreement or the Credit Agreement referenced in the IP Security Agreement, as applicable;

WHEREAS, pursuant to the IP Security Agreement, to secure the prompt payment and performance of all Obligations (as defined in the Credit Agreement) to Agent and each other Secured Party, Grantors have collaterally assigned, pledged and granted to Agent, for its benefit and for the ratable benefit of the other Secured Parties, a continuing security interest in and to and lien upon all of such Grantor's right, title and interest in, to and under the Intellectual Property Collateral of each Grantor, all whether now owned or hereafter created, arising and/or acquired; and

WHEREAS, pursuant to the IP Security Agreement, Grantors have agreed that upon the acquisition by Grantors of any new Intellectual Property Collateral, Grantors shall deliver to Agent a Supplement to the IP Security Agreement pursuant to this Supplement pursuant to which Grantors shall reconfirm the grant by them of a security interest in and lien upon all such newly acquired Intellectual Property Collateral, which such Supplement is intended by the parties to be filed with the United States Patent and Trademark Office and/or United States Copyright Office, as applicable,

NOW, THEREFORE, in consideration of the premises set forth herein and for other good and valuable consideration, receipt and sufficiency of which are hereby acknowledged by each party hereto, and intending to be legally bound, and with the foregoing background and recitals incorporated by reference, Grantors agree as follows:

1. Grant and Reaffirmation of Grant of Security Interests. Without limiting any other grant of any security interest or lien by any Grantor in and upon any Collateral under the Credit Agreement or any of the Other Documents, to secure the prompt payment and performance of all Obligations to Agent and the other Secured Parties, each Grantor hereby collaterally assigns, pledges and grants to Agent, for its benefit and for the ratable benefit of the other Secured Parties, a continuing security interest in and to and lien upon all of such Grantor's right, title and interest in, to and under the following Collateral of Grantor, all whether now owned or hereafter created, arising and/or acquired:

(a) the newly acquired Intellectual Property Collateral listed on Schedule 1 to this Supplement (together with all reissues, reexaminations, continuations, continuations-in-part, divisionals, renewals and extensions of the foregoing),

(b) all goodwill of the business connected with the use of, and symbolized by, any trademark and trademark application covered by (a) above; and

(c) all other property otherwise constituting Intellectual Property Collateral relating to the foregoing.

Grantors agree that all such newly acquired Intellectual Property Collateral described above shall be included in and be part of the Intellectual Property Collateral under and subject to all of the terms and provisions of the IP Security Agreement. Grantors hereby authorize Agent to file and record a copy of this Supplement with the United States Patent and Trademark Office and/or United States Copyright Office, as applicable.

Representations and Warranties. Each Grantor hereby represents and warrants to Agent and to the other Secured Parties that Schedule I hereto sets forth a full, complete and correct list of all Intellectual Property Collateral owned by Grantor as of the date hereof not listed on Schedule 1 to the original IP Security Agreement or any Schedule to any other Supplement to the original IP Security Agreement delivered by Grantor since the date thereof but prior to the date hereof.

Incorporation of the IP Security Agreement. The terms and provisions of the IP Security Agreement are hereby incorporated by reference and this Supplement shall be considered an amendment and supplement to and part of the IP Security Agreement; all of the provisions of which IP Security Agreement are and remain in full force and effect as supplemented by this Supplement.

[Remainder of Page Left Intentionally Blank]

IN WITNESS WHEREOF, Grantors have duly executed this Supplement to the IP Security Agreement as of the date first written above.

GRANTORS:

PERMA-PIPE INTERNATIONAL HOLDINGS,
INC.

By: _____
Name:
Title:

PERMA-PIPE, INC.

By: _____
Name:
Title:

PERMA-PIPE CANADA, LTD.

By: _____
Name:
Title:

PERMA-PIPE CANADA, INC.

By: _____
Name:
Title:

ACCEPTED AND AGREED
as of the date first above written:

PNC BANK, NATIONAL ASSOCIATION.

By: _____
Name:
Title:

SCHEDULE I

TO SUPPLEMENT TO INTELLECTUAL PROPERTY SECURITY AGREEMENT

DATED _____