

07-25-2002



Form PTO-1595

RE

(Rev. 03/01)

OMB No. 0651-0027 (exp. 5/31/2002)

U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

Tab settings ⇨ ⇨ ⇨ ▼ ▼ ▼ ▼ ▼ ▼ ▼

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

Hudson Products Corporation,  
a Texas corporation

7.19.02

## 2. Name and address of receiving party(ies)

Name: Comerica Bank, as Agent

Internal Address: \_\_\_\_\_

Street Address: One Detroit Center, 6th Floor

City: Detroit State: MI Zip: 48275-3280

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

☐

Assignment

☐

Merger

☒

Security Agreement

☐

Change of Name

☐

Other \_\_\_\_\_

Execution Date: 7/10/02

Additional name(s) & address(es) attached? ☐ Yes ☒ No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s) 10/138867

B. Patent No.(s) 4657070; 4634341;

4720244; 5145000; 5156786; 5213476

Additional numbers attached? ☒ Yes ☐ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Angela Alvarez Sujek

Internal Address: Bodman, Longley &amp; Dahling LLP

Street Address: 110 Miller, Suite 300

City: Ann Arbor State: MI Zip: 48104

## 6. Total number of applications and patents involved: 32

7. Total fee (37 CFR 3.41).....\$ 1,280.00

☒

Enclosed

☐

Authorized to be charged to deposit account

## 8. Deposit account number:

02-2880

DO NOT USE THIS SPACE

## 9. Signature.

Angela Alvarez Sujek

Name of Person Signing

Signature

July 19, 2002

Date

Total number of pages including cover sheet, attachments, and documents: 25

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

07/24/2002 AWNED1 00000233 10138867

01 FC:581

1280.00 UP

PATENT  
REEL: 013110 FRAME: 0271

**Recordation Form Cover Sheet Continuation**

**Hudson Products Corporation**

Additional Patent Numbers

5165859  
5210946  
5328330  
5328329  
5328335  
5512011  
5511613  
5765629  
5653281  
5741450  
5766320  
5694685  
6019555  
6241009  
5947111  
6234210  
6267358  
6004385  
6096121  
6311986  
5653284  
5579830  
5159974  
5579828  
5379831

AGREEMENT  
(Patent)

THIS AGREEMENT (PATENT) (this "Agreement"), dated as of July 10, 2002, between Hudson Products Corporation, a Texas corporation ("Company" and sometimes a "Debtor"), and Comerica Bank in its capacity as agent for the Banks referred to below.

WITNESSETH

A. WHEREAS, pursuant to that certain Credit Agreement dated as of July 10, 2002 (as amended or otherwise modified from time to time, the "Credit Agreement"), among the Borrowers, each of the financial institutions party thereto (collectively, the "Banks") and Secured Party, as Agent for the Banks, the Banks have agreed, subject to the satisfaction of certain terms and conditions, to make Advances to Borrowers and to provide for the issuance of Letters of Credit for the account of Borrowers, individually, or jointly and severally with certain of the other Account Parties (as such terms are defined in the Credit Agreement), as provided therein; and

B. WHEREAS, in connection with the Credit Agreement, the Debtors have executed and delivered a Security Agreement, dated as of the date hereof (as amended or otherwise modified from time to time, the "Security Agreement"); and

C. WHEREAS, as a condition precedent to the making of the initial Advances under the Credit Agreement, the Debtors are required to execute and deliver this Agreement and to further confirm the grant to the Secured Party for the benefit of the Banks a continuing security interest in all of the Patent Collateral (as defined below) to secure all Indebtedness.

NOW, THEREFORE, for good and valuable consideration the receipt of which is hereby acknowledged, and in order to induce the Banks to make Advances (including the initial Advance) to the Borrowers pursuant to the Credit Agreement, the Debtors agrees, for the benefit of the Banks, as follows:

SECTION 1. Definitions. Unless otherwise defined herein or the context otherwise requires, terms used in this Agreement, including its preamble and recitals, have the meanings provided in the Security Agreement.

SECTION 2. Grant of Security Interest. For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, to secure all of the Indebtedness, each of the Debtors does hereby mortgage, pledge and hypothecate to the Secured Party for the benefit of the Banks, and grant to the Secured Party for the benefit of the Banks a security interest in, all of the following property (the "Patent Collateral"), whether now owned or hereafter acquired or existing:

- (a) all letters patent and applications for letters patent throughout the world, including all patent applications in preparation for filing anywhere in the world and

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including each patent and patent application referred to in Item A of Attachment 1 hereto;

(b) all patent licenses, including each patent license referred to in Item B of Attachment 1 hereto;

(c) all reissues, divisions, continuations, continuations-in-part, extensions, renewals and reexaminations of any of the items described in the foregoing clauses (a) and (b); and

(d) all proceeds of, and rights associated with, the foregoing (including license royalties and proceed of infringement suits), the right to sue third parties for past, present or future infringements of any patent or patent application, including any patent or patent application referred to in Item A of Attachment 1 hereto, and for breach or enforcement of any patent license, including any patent license referred to in Item B of Attachment 1 hereto, and all rights corresponding thereto throughout the world.

SECTION 3. Security Agreement. This Agreement has been executed and delivered by the Debtors for the purpose of registering the security interest of the Secured Party and the Banks in the Patent Collateral with the United States Patent and Trademark Office and corresponding offices in other countries of the world. The security interest granted hereby has been granted as a supplement to, and not in limitation of, the security interest granted to the Secured Party and the Banks under the Security Agreement. The Security Agreement (and all rights and remedies of the Secured Party and the Banks thereunder) shall remain in full force and effect in accordance with its terms.

SECTION 4. Release of Security Interest. Upon payment in full of all Indebtedness (other than with respect to contingent indemnification obligations to the extent no claim has been asserted) and commitment (whether optional or obligatory) to extend any credit under the Credit Agreement has been terminated, the Secured Party shall, at the Debtors' expense, execute and deliver to the Debtors all instruments and other documents as may be necessary or proper to release the lien on and security interest in the Patent Collateral which has been granted hereunder.

SECTION 5. Acknowledgment. Each of the Debtors does hereby further acknowledge and affirm that the rights and remedies of the Secured Party for the benefit of the Banks with respect to the security interest in the Patent Collateral granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which (including the remedies provided for therein) are incorporated by reference herein as if fully set forth herein.

SECTION 6. Loan Documents, etc. This Agreement is a Loan Document executed pursuant to the Credit Agreement and shall (unless otherwise expressly indicated herein) be construed, administered and applied in accordance with the terms and provisions of the Credit Agreement.

SECTION 7. Counterparts. This Agreement may be executed by the parties hereto in

Agreement.

SECTION 7. Counterparts. This Agreement may be executed by the parties hereto in several counterparts, each of which shall be deemed to be an original and all of which shall constitute together but one and the same agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed and delivered by their respective officers thereunto duly authorized as of the day and year first above written.

DEBTORS:

**HUDSON PRODUCTS CORPORATION**

By: 

Its: President

Address: 10114 Highway 59  
Beasley, TX 77417  
Attention: Larry W. Gies, Jr.  
Facsimile No.: \_\_\_\_\_

COMERICA BANK, as Agent for the Banks

By: \_\_\_\_\_  
Name: Andrew W. Roy  
Title: Vice President

Address: One Detroit Center  
6th Floor  
Detroit, MI 48275-3280  
Attention: Metropolitan Loan Division F/Group  
Manager  
Facsimile No: (313) 222-3503

several counterparts, each of which shall be deemed to be an original and all of which shall constitute together but one and the same agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed and delivered by their respective officers thereunto duly authorized as of the day and year first above written.

**DEBTORS:**

**HUDSON PRODUCTS CORPORATION**

By: \_\_\_\_\_


Its: \_\_\_\_\_

Address: \_\_\_\_\_

Attention: \_\_\_\_\_

Facsimile No.: \_\_\_\_\_

COMERICA BANK, as Agent for the Banks

By: 

Name: Andrew W. Roy

Title: Vice President

Address: One Detroit Center  
6th Floor  
Detroit, MI 48275-3280

Attention: Metropolitan Loan Division F/Group  
Manager

Facsimile No: (313) 222-3503

Item A.      Patents**Patents Granted**

<b>Country</b>	<b>Patent</b>	<b>Patent Number</b>	<b>Issue Date</b>	<b>Status</b>
United States	0202 Air Cooled Vapor Condensers	4657070	14-Apr-1987	Granted
United States	0205 Axial Flow Fans	4634341	06-Jan-1987	Granted
United States	0215 Fan Blade for an Axial Flow Fan and Method of Forming Same	4720244	19-Jan-1988	Granted
United States	5071 Steam Condensate Storage Tank with Non-Freezing Feature	5145000	08-Sep-1992	Granted
United States	5079 Method for Manufacturing Fan Blades	5156786	20-Oct-1992	Granted
United States	5245 Fan Blade	5213476	25-May-1993	Granted
United States	5256 Leading Edge Protection for Fan Blade	5165859	24-Nov-1992	Granted
United States	5288 Leading Edge Protection for Fan Blade	5210946	18-May-1993	Granted
United States	5329 Extruded Aluminum Fan Blade	5328330	12-Jul-1994	Granted
United States	5330 Fan Blade Width Extender	5328329	12-Jul-1994	Granted
United States	5366 Static Efficiency Enhancer for Axial Fans	5328335	12-Jul-1994	Granted
United States	5567 Cover Plate Header Tongue and Groove Grinding/Polishing Machine	5512011	30-Apr-1996	Granted
United States	5575 Elongated Heat Exchanger Tubes Having	5511613	30-Apr-1996	Granted

Country	Patent	Patent Number	Issue Date	Status
	Internal Stiffening Structure			
United States	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	5765629	16-Jun-1998	Granted
United States	5693 Steam Condensing Module with Integral, Stacked Vent Condenser	5653281	05-Aug-1997	Granted
United States	5742 Method of and Apparatus for Molding a Hollow Fan Blade	5741450	21-Apr-1998	Granted
United States	5835 Integral Deaerator for Heat Pipe Steam Condenser	5766320	16-Jun-1998	Granted
United States	5880 Method and Apparatus for Treating Header Plug Gasket Face	5694685	09-Dec-1997	Granted
United States	5913 Deburr Tool for Simultaneously Removing Burrs from and Chamfering a Hole in a Workpiece	6019555	01-Feb-2000	Granted
United States	5935 Integrated Heat Pipe Vent Condenser	6241009	05-Jun-2001	Granted
United States	5940 Apparatus for Controlled Heating or Process Fluids	5947111	07-Sep-1999	Granted
United States	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	6234210	22-May-2001	Granted
United States	6019 Low Pressure Drop Inlet for High	6267358	18-Jun-1999	Granted



<b>Country</b>	<b>Patent</b>	<b>Patent Number</b>	<b>Issue Date</b>	<b>Status</b>
	Velocity Absorbers with Straight Tanks			
United States	5984 Compact Gas Liquid Separation System with Real-Time Performance	6004385	21-Dec-1999	Granted
United States	6007 Seal Joint for Multiple Internal Separator Arrangement	6096121	01-Aug-2000	Granted
United States	6008 Seal Joint Between Internals and Pressure Vessel Inlet	6311986	06-Nov-2001	Granted
United States	5704 Heat Pipe Heat Exchanger Tube Sheet	5653284	05-Aug-1997	Granted
United States	5722 Passive Cooling of Enclosures Using Heat Pipes	5579830	03-Dec-1996	Granted
United States	5084 Steam Condenser with Articulated Electrically Heated Blankets or Panels	5159974	03-Nov-1992	Granted
United States	5715 Flexible Insert for Heat Pipe Freeze Protection	5579828	03-Dec-1996	Granted
United States	5328 Heat Pipe Heat Exchanger	5379831	10-Jan-1995	Granted
Spain	0197 Axial Flow and Blades Therefor	509213	07-Oct-1982	Granted
Australia	0199 Air Cooled Steam Condenser Control	551555	13-Oct-1986	Granted
Canada	0199 Air Cooled Steam Condenser Control	1209351	12-Aug-1986	Granted
Germany	0199 Air Cooled Steam Condenser	3320712	08-Jun-1995	Granted

Country	Patent	Patent Number	Issue Date	Status
	Control			
France	0199 Air Cooled Steam Condenser Control	8310756	13-Jul-1989	Granted
United Kingdom	0199 Air Cooled Steam Condenser Control	2135206	17-Sep-1986	Granted
Italy	0199 Air Cooled Steam Condenser Control	1171816	10-Jun-1987	Granted
Japan	0199 Air Cooled Steam Condenser Control	1803751	26-Nov-1993	Granted
Mexico	0199 Air Cooled Steam Condenser Control	157210	03-Nov-1988	Granted
South Africa	0199 Air Cooled Steam Condenser Control	83/3514	30-May-1984	Granted
European Patent Convention <sup>1</sup>	0215 Fan Blade for an Axial Flow Fan and Method of Forming Same	EP0292086	31-Jul-1991	Granted
Australia	0215 Fan Blade for an Axial Flow Fan and Method of Forming Same	594612	23-Jul-1990	Granted
Belgium	0215 Fan Blade for an Axial Flow Fan and Method of Forming Same	EP0292086	31-Jul-1991	Granted
Brazil	0215 Fan Blade for an Axial Flow Fan and Method of Forming Same	PI8800139	27-Aug-1991	Granted
Canada	0215 Fan Blade for an Axial Flow Fan and Method of Forming Same	1251183	14-Mar-1989	Granted
Germany	0215 Fan Blade for an Axial Flow Fan and Method of	P3863971.8	31-Jul-1991	Granted

<sup>1</sup> EPC patent grants must be followed on by a national patent filing in order to preserve patent rights in the EU member states.

Country	Patent	Patent Number	Issue Date	Status
	Forming Same			
United Kingdom	0215 Fan Blade for an Axial Flow Fan and Method of Forming Same	EP0292086	31-Jul-1991	Granted
Japan	0215 Fan Blade for an Axial Flow Fan and Method of Forming Same	1804933	26-Nov-1993	Granted
Liechtenstein	0215 Fan Blade for an Axial Flow Fan and Method of Forming Same	EP0292086	31-Jul-1991	Granted
Mexico	0215 Fan Blade for an Axial Flow Fan and Method of Forming Same	161128	03-Aug-1990	Granted
Netherlands	0215 Fan Blade for an Axial Flow Fan and Method of Forming Same	EP0292086	31-Jul-1991	Granted
Australia	5079 Method for Manufacturing Fan Blades	634377	11-Jun-1993	Granted
Belgium	5079 Method for Manufacturing Fan Blades	EP0456169	29-Nov-1995	Granted
Brazil	5079 Method for Manufacturing Fan Blades	PI9102099-9	28-Dec-1999	Granted
Canada	5079 Method for Manufacturing Fan Blades	2043747	27-Jun-1995	Granted
China	5079 Method for Manufacturing Fan Blades	36343	08-Feb-1997	Granted
Germany	5079 Method for Manufacturing Fan Blades	P69114926	29-Nov-1995	Granted
European Patent Convention	5079 Method for Manufacturing Fan Blades	EP0456169	29-Nov-1995	Granted
France	5079 Method for Manufacturing Fan Blades	0465169	28-Jun-1991	Granted

<b>Country</b>	<b>Patent</b>	<b>Patent Number</b>	<b>Issue Date</b>	<b>Status</b>
United Kingdom	5079 Method for Manufacturing Fan Blades	EP0456169	29-Nov-1995	Granted
Indonesia	5079 Method for Manufacturing Fan Blades	ID0000826	24-Jul-1996	Granted
Italy	5079 Method for Manufacturing Fan Blades	EP0456169	29-Nov-1995	Granted
Japan	5079 Method for Manufacturing Fan Blades	2016692	19-Feb-1996	Granted
Liechtenstein	5079 Method for Manufacturing Fan Blades	EP0456169	29-Nov-1995	Granted
Mexico	5079 Method for Manufacturing Fan Blades	173885	07-Apr-1994	Granted
Netherlands	5079 Method for Manufacturing Fan Blades	EP0456169	29-Nov-1995	Granted
South Africa	5079 Method for Manufacturing Fan Blades	91/3305	26-Feb-1992	Granted
Australia	5256 Leading Edge Protection for Fan Blade	647330	30-Jun-1994	Granted
Brazil	5256 Leading Edge Protection for Fan Blade	PI9302423-1	29-Sep-1998	Granted
Canada	5256 Leading Edge Protection for Fan Blade	2090583	18-Nov-1997	Granted
European Patent Convention	5256 Leading Edge Protection for Fan Blade	EP0576117	21-Feb-1996	Granted
Germany	5256 Leading Edge Protection for Fan Blade	69301582.9	21-Feb-1996	Granted
United Kingdom	5256 Leading Edge Protection for Fan Blade	EP0576117	21-Feb-1996	Granted
Indonesia	5256 Leading Edge Protection for Fan Blade	ID0000740	25-Jun-1996	Granted

<b>Country</b>	<b>Patent</b>	<b>Patent Number</b>	<b>Issue Date</b>	<b>Status</b>
India	5256 Leading Edge Protection for Fan Blade	178703	29-Jan-1998	Granted
Iran	5256 Leading Edge Protection for Fan Blade	24962	20-Jan-1993	Granted
Italy	5256 Leading Edge Protection for Fan Blade	0576117	21-Feb-1996	Granted
Korea	5256 Leading Edge Protection for Fan Blade	118296	16-Jul-1997	Granted
Mexico	5256 Leading Edge Protection for Fan Blade	182338	08-Aug-1996	Granted
Austria	5329 Extruded Aluminum Fan Blade	EP0638726	13-May-1998	Granted
Australia	5329 Extruded Aluminum Fan Blade	660876	23-Oct-1995	Granted
Azerbaijan	5329 Extruded Aluminum Fan Blade	I990117	21-Aug-1999	Granted
Belgium	5329 Extruded Aluminum Fan Blade	EP0638726	13-May-1998	Granted
Brazil	5329 Extruded Aluminum Fan Blade	PI9402980-6	29-Dec-1998	Granted
Canada	5329 Extruded Aluminum Fan Blade	2127077	08-Feb-2000	Granted
Chile	5329 Extruded Aluminum Fan Blade	39701	07-Sep-1998	Granted
China	5329 Extruded Aluminum Fan Blade	94107816.7	28-Apr-2000	Granted
Germany	5329 Extruded Aluminum Fan Blade	69410186.9	13-May-1998	Granted
Denmark	5329 Extruded Aluminum Fan Blade	EP0638726	13-May-1998	Granted

<b>Country</b>	<b>Patent</b>	<b>Patent Number</b>	<b>Issue Date</b>	<b>Status</b>
European Patent Convention	5329 Extruded Aluminum Fan Blade	EP0638726	13-May-1998	Granted
France	5329 Extruded Aluminum Fan Blade	EP0638726	13-May-1998	Granted
United Kingdom	5329 Extruded Aluminum Fan Blade	EP0638726	13-May-1998	Granted
Indonesia	5329 Extruded Aluminum Fan Blade	ID0003325	04-Dec-1998	Granted
Italy	5329 Extruded Aluminum Fan Blade	EP0638726	13-May-1998	Granted
Korea	5329 Extruded Aluminum Fan Blade	133098	16-Dec-1997	Granted
Mexico	5329 Extruded Aluminum Fan Blade	188300	18-Mar-1998	Granted
Malaysia	5329 Extruded Aluminum Fan Blade	MY-110870-A	31-May-1999	Granted
Netherlands	5329 Extruded Aluminum Fan Blade	EP0638726	13-May-1998	Granted
Romania	5329 Extruded Aluminum Fan Blade	112016	31-Mar-1997	Granted
Thailand	5329 Extruded Aluminum Fan Blade	7470	24-Dec-1997	Granted
Taiwan	5329 Extruded Aluminum Fan Blade	091157	27-Mar-1998	Granted
Venezuela	5329 Extruded Aluminum Fan Blade	835/94 <sup>2</sup>	14-Jun-1994	Granted
South Africa	5329 Extruded Aluminum Fan Blade	94/4230	26-Apr-1995	Granted

<sup>2</sup> Patent Number not yet available; when certificate of registration is received, will provide patent number.

<b>Country</b>	<b>Patent</b>	<b>Patent Number</b>	<b>Issue Date</b>	<b>Status</b>
Canada	5575 Elongated Heat Exchanger Tubes Having Internal Stiffening Structure	2164930	17-Nov-1998	Granted
Australia	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	712121	10-Feb-2000	Granted
Canada	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	2202076	27-Jun-2000	Granted
Korea	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	203196	29-Mar-1997	Granted
Mexico	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	198130	17-Aug-2000	Granted
Taiwan	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	093621	22-Jul-1998	Granted
Venezuela	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	615/97 <sup>3</sup>	07-Apr-1997	Granted
South Africa	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	97/2834	25-Mar-1998	Granted
Australia	5693 Steam Condensing Module with	679154	09-Oct-1997	Granted

<sup>3</sup> Patent Number not available; when certificate of registration is received, will provide patent number.

<b>Country</b>	<b>Patent</b>	<b>Patent Number</b>	<b>Issue Date</b>	<b>Status</b>
	Integral, Stacked Vent Condenser			
Brazil	5693 Steam Condensing Module with Integral, Stacked Vent Condenser	PI9606145-6	14-Nov-2000	Granted
Canada	5693 Steam Condensing Module with Integral, Stacked Vent Condenser	2191399	14-Sep-1999	Granted
Indonesia	5693 Steam Condensing Module with Integral, Stacked Vent Condenser	ID0005926	31-Jan-2001	Granted
Japan	5693 Steam Condensing Module with Integral, Stacked Vent Condenser	3057018	14-Apr-2000	Granted
Korea	5693 Steam Condensing Module with Integral, Stacked Vent Condenser	194853	10-Feb-1999	Granted
Mexico	5693 Steam Condensing Module with Integral, Stacked Vent Condenser	196420	12-May-2000	Granted
Singapore	5693 Steam Condensing Module with Integral, Stacked Vent Condenser	44993	28-Sep-1998	Granted
Taiwan	5693 Steam Condensing Module with Integral, Stacked Vent Condenser	094199	26-Aug-1998	Granted
Venezuela	5693 Steam Condensing Module with	2194-96	17-Dec-1996	Granted



Country	Patent	Patent Number	Issue Date	Status
	Integral, Stacked Vent Condenser			
Australia	5742 Method of and Apparatus for Molding a Hollow Fan Blade	681564	18-Dec-1997	Granted
Canada	5742 Method of and Apparatus for Molding a Hollow Fan Blade	2193328	18-Dec-1996	Granted
China	5742 Method of and Apparatus for Molding a Hollow Fan Blade	ZL 97102288	03-Feb-2001	Granted
Indonesia	5742 Method of and Apparatus for Molding a Hollow Fan Blade	0006057	16-Mar-2001	Granted
Japan	5742 Method of and Apparatus for Molding a Hollow Fan Blade	3222079	17-Aug-2001	Granted
Korea	5742 Method of and Apparatus for Molding a Hollow Fan Blade	211352	03-May-1999	Granted
Mexico	5742 Method of and Apparatus for Molding a Hollow Fan Blade	197434	11-Jul-2000	Granted
Singapore	5742 Method of and Apparatus for Molding a Hollow Fan Blade	66807	19-Nov-2001	Granted
Thailand	5742 Method of and Apparatus for Molding a Hollow Fan Blade	10874	23-Aug-2001	Granted
Taiwan	5742 Method of and Apparatus for Molding a Hollow Fan Blade	197434	11-Jul-2000	Granted
Venezuela	5742 Method of and Apparatus for Molding a Hollow	58205	14-Jan-1997	Granted

Country	Patent	Patent Number	Issue Date	Status
	Fan Blade			
United Kingdom	5940 Apparatus for Controlled Heating or Process Fluids	2336900	21-Nov-2001	Granted
Indonesia	5940 Apparatus for Controlled Heating or Process Fluids	ID0006272	03-May-2001	Granted
Japan	5940 Apparatus for Controlled Heating or Process Fluids	2989599	08-Oct-1999	Granted
Canada	6209 System for Separating Oil-Water Emulsion	1264443	16-Jan-1990	Granted

**Pending or Published Patent Applications**

<b>Country</b>	<b>Patent</b>	<b>Application Number</b>	<b>Filing Date</b>	<b>Status</b>
United States	7037 Heat Shield	10/138867	03-May-2002	Pending
Kuwait	5256 Leading Edge Protection for Fan Blade	PA77/92	22-Nov-1992	Pending
Saudi Arabia	5256 Leading Edge Protection for Fan Blade	93130443	30-Mar-1993	Pending
Argentina	5256 Leading Edge Protection for Fan Blade	328864	20-Jul-1994	Pending
Czech Republic	5256 Leading Edge Protection for Fan Blade	PV1689-94	13-Jul-1994	Pending
Algeria	5329 Extruded Aluminum Fan Blade	0092-94/1994	30-Jul-1994	Pending
Slovakia	5329 Extruded Aluminum Fan Blade	PV871-94	19-Jul-1994	Pending
Brazil	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	PI9701728-0	08-Apr-1997	Published
China	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	97110313.5	31-Mar-1997	Pending
Germany	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	97302365.8	07-Apr-1997	Pending
European Patent Convention	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	97302365.8	07-Apr-1997	Published
Spain	5650 Steam	97302365.8	07-Apr-1997	Published

Country	Patent	Application Number	Filing Date	Status
	Condensing Apparatus with Freeze-Protected Vent Condenser			
France	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	97302365.8	07-Apr-1997	Published
United Kingdom	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	97302365.8	07-Apr-1997	Published
India	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	521CAL97	25-Mar-1997	Published
Italy	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	97302365.8	07-Apr-1997	Published
Japan	5650 Steam Condensing Apparatus with Freeze-Protected Vent Condenser	09-105435	09-Apr-1997	Published
U.A.E.	5693 Steam Condensing Module with Integral, Stacked Vent Condenser	187/96	07-Dec-1996	Pending
China	5693 Steam Condensing Module with Integral, Stacked Vent Condenser	96123274.9	19-Dec-1996	Pending
Italy	5693 Steam Condensing Module with Integral, Stacked Vent Condenser	96308534.5	26-Nov-1996	Published

<b>Country</b>	<b>Patent</b>	<b>Application Number</b>	<b>Filing Date</b>	<b>Status</b>
Saudi Arabia	5693 Steam Condensing Module with Integral, Stacked Vent Condenser	97170555	15-Jan-1997	Pending
Thailand	5693 Steam Condensing Module with Integral, Stacked Vent Condenser	034443	26-Nov-1996	Published
Brazil	5742 Method of and Apparatus for Molding a Hollow Fan Blade	PI9606196-0	27-Dec-1996	Published
Germany	5742 Method of and Apparatus for Molding a Hollow Fan Blade	96309127.7	13-Dec-1996	Pending
European Patent Convention	5742 Method of and Apparatus for Molding a Hollow Fan Blade	96309127.7	13-Dec-1996	Published
France	5742 Method of and Apparatus for Molding a Hollow Fan Blade	96309127.7	13-Dec-1996	Pending
United Kingdom	5742 Method of and Apparatus for Molding a Hollow Fan Blade	96309127.7	13-Dec-1996	Pending
Italy	5742 Method of and Apparatus for Molding a Hollow Fan Blade	96309127.7	13-Dec-1996	Pending
Saudi Arabia	5742 Method of and Apparatus for Molding a Hollow Fan Blade	97170571	20-Jan-1997	Pending
Mexico	5913 Debur Tool for Simultaneously Removing Burrs from and Chamfering a Hole in a Workpiece	989736	19-Nov-1998	Pending

<b>Country</b>	<b>Patent</b>	<b>Application Number</b>	<b>Filing Date</b>	<b>Status</b>
Korea	5913 Debur Tool for Simultaneously Removing Burrs from and Chamfering a Hole in a Workpiece	98-47446	06-Nov-1998	Pending
Venezuela	5913 Debur Tool for Simultaneously Removing Burrs from and Chamfering a Hole in a Workpiece	2580/98	16-Nov-1998	Pending
Canada	5935 Integrated Heat Pipe Vent Condenser	2320493	21-Sep-2000	Pending
Azerbaijan	5940 Apparatus for Controlled Heating or Process Fluids	20010063 <sup>4</sup>	17-Mar-1999	Pending
Canada	5940 Apparatus for Controlled Heating or Process Fluids	2262990	23-Feb-1999	Pending
China	5940 Apparatus for Controlled Heating or Process Fluids	98122905.0	26-Nov-1998	Published
India	5940 Apparatus for Controlled Heating or Process Fluids	380CAL99	23-Apr-1999	Pending
Mexico	5940 Apparatus for Controlled Heating or Process Fluids	989077	30-Oct-1998	Pending
Norway	5940 Apparatus for Controlled Heating or Process Fluids	P19986075	23-Dec-1998	Pending
Russian Federation	5940 Apparatus for Controlled	99109043	27-Apr-1999	Pending

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<sup>4</sup> Patent Number

Country	Patent	Application Number	Filing Date	Status
	Heating or Process Fluids			
Venezuela	5940 Apparatus for Controlled Heating or Process Fluids	283-99	18-Feb-1999	Published
Switzerland	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99306848.5	27-Aug-1999	Pending
China	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99120742.4	20-Sep-1999	Published
Germany	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99306848.5	27-Aug-1999	Pending
Denmark	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99306848.5	27-Aug-1999	Pending
European Patent Convention	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99306848.5	27-Aug-1999	Pending
Spain	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99306848.5	27-Aug-1999	Pending
France	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99306848.5	27-Aug-1999	Pending
United Kingdom	6011 Elliptical Heat Pipe with Carbon Steel Fins	99306848.5	27-Aug-1999	Pending

Country	Patent	Application Number	Filing Date	Status
	and Bonded with Zinc Galvanizing			
Greece	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99306848.5	27-Aug-1999	Pending
Indonesia	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	P20000088	04-Feb-2000	Pending
Ireland	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99306848.5	27-Aug-1999	Pending
India	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	1CAL2000	03-Jan-2000	Pending
Italy	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99306848.5	27-Aug-1999	Pending
Japan	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	2000-25149	02-Feb-2000	Published
Korea	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99-38043	08-Sep-1999	Published
Liechtenstein	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99306848.5	27-Aug-1999	Pending
Luxembourg	6011 Elliptical Heat Pipe with	99306848.5	27-Aug-1999	Pending



Country	Patent	Application Number	Filing Date	Status
	Carbon Steel Fins and Bonded with Zinc Galvanizing			
Monaco	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99306848.5	27-Aug-1999	Pending
Mexico	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	9911050	30-Nov-1999	Pending
Netherlands	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99306848.5	27-Aug-1999	Pending
Portugal	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99306848.5	27-Aug-1999	Pending
Sweden	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	99306848.5	27-Aug-1999	Pending
Taiwan	6011 Elliptical Heat Pipe with Carbon Steel Fins and Bonded with Zinc Galvanizing	88116637	28-Sep-1999	Published

**Recordation Form Cover Sheet Continuation**

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Additional Patent Numbers

5165859  
5210946  
5328330  
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5328335  
5512011  
5511613  
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5653284  
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5159974  
5579828  
5379831

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