

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3320636

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
METAL MATRIX CAST COMPOSITES, LLC	04/08/2015
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	PARKER-HANNIFIN CORPORATION
<b>Street Address:</b>	6035 PARKLAND BLVD.
<b>City:</b>	CLEVELAND
<b>State/Country:</b>	OHIO
<b>Postal Code:</b>	44124-4141
<b>PROPERTY NUMBERS Total: 3</b>	
<b>Property Type</b>	<b>Number</b>
<b>Patent Number:</b>	6148899
<b>Patent Number:</b>	6776219
<b>Patent Number:</b>	8043703
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(216)896-4027
<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>	
<b>Phone:</b>	2168962212
<b>Email:</b>	ssieger@parker.com
<b>Correspondent Name:</b>	PARKER-HANNIFIN CORPORATION
<b>Address Line 1:</b>	6035 PARKLAND BLVD.
<b>Address Line 4:</b>	CLEVELAND, OHIO 44124-4141
<b>NAME OF SUBMITTER:</b>	JOHN A. MOLNAR, ESQ.
<b>SIGNATURE:</b>	/JOHN MOLNAR/
<b>DATE SIGNED:</b>	04/22/2015
<b>Total Attachments: 2</b>	
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**CONFIRMATORY ASSIGNMENT OF PATENT RIGHTS**

Metal Matrix Cast Composites, LLC, corporation Delaware limited liability company having an address at 101 Clematis Avenue, Unit #1, Waltham, MA 02453 ("Assignor"), hereby acknowledges that for good and valuable consideration, the receipt of which is hereby acknowledged, it has sold, assigned, transferred, and set over, unto Parker-Hannifin Corporation, a corporation of the State of Ohio, USA, having an address at 6035 Parkland Boulevard, Cleveland, Ohio, 44124-4141, its successors and assigns, (herein referred to as "Assignee"), the entire right, title, and interest in, to and under the patents and patent applications identified in the Attachment hereto, including all divisions, continuations, renewals, substitutes, reissues, reexaminations, and extensions thereof, and all patents and patent applications, worldwide, claiming priority thereto, and the invention(s) set forth therein, and any and all claims, demands, causes of action, damages and remedies of every kind recoverable at law or in equity or otherwise from any and every party for any and every infringement of such patents and patent applications together with the rights to bring and maintain any action for past infringements and for the recovery of damages and fees.

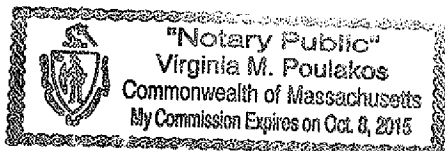
Assignor agrees that Assignee may record this Confirmatory Assignment in the U.S. Patent & Trademark Office and other such offices, where it will be open for public inspection.

Date: 4/8/15

By: Mark Ryals  
Name: MARK RYALS  
Title: President/CEO  
Company: MMCC, LLC

STATE OF Massachusetts )  
 ) SS:  
COUNTY OF Middlesex )

On this 8<sup>th</sup> day of April, 2015, before me personally appeared Mark Ryals to me known, who, being by me duly sworn, did depose and say that he/she is the president/ceo of mmcc, LLC, the corporation described in and which executed the foregoing instrument, that said instrument was executed with authorization by the board of directors of said corporation, and that he/she signed his/her name thereto by like authorization.



Virginia M. Poulakos  
Notary Public

My Commission Expires: 10/8/2015

**ATTACHMENT TO:  
CONFIRMATORY ASSIGNMENT OF PATENT RIGHTS**

<b>Title</b>	<b>Country</b>	<b>Status</b>	<b>Filing Date</b>	<b>Application Number</b>	<b>Issue or Publication Date</b>	<b>Patent or Publication Number</b>
Methods of High Throughput Pressure Infiltration Casting	US		Jan. 29, 1998	09/015,822		6,148,899
Castable Refractory Investment Mold Materials and Methods of Their Use in Infiltration Casting	US		Sept. 20, 1999	09/399,123		6,776,219 B1
Thermally Conductive Graphite Reinforced Alloys	US		Sept. 13, 2007	11/900,727		8,043,703 B2