

<b>PATENT ASSIGNMENT COVER SHEET</b>
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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JINKWAN KIM	07/16/2019
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<b>Postal Code:</b>	06797
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<b>City:</b>	SEOUL
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<b>Postal Code:</b>	06797
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16687123
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<b>NAME OF SUBMITTER:</b>	PETER F. CORLESS
<b>SIGNATURE:</b>	/Peter F. Corless/
<b>DATE SIGNED:</b>	11/18/2019
<b>Total Attachments: 2</b>	

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## ASSIGNMENT


<b>Title of Invention</b>	<b>METHOD OF CASTING HETEROGENEOUS MATERIALS AND A CASTING PRODUCT MANUFACTURED THEREBY</b>
<p>We, the undersigned, for good and valuable consideration, the receipt of which is hereby acknowledged, confirm that we have sold and assigned, and do hereby assign, sell and transfer to the ASSIGNEE listed below: (1) our entire right, title and interest for the United States and in all countries, in and to any and all inventions, discoveries and applications which are disclosed in:</p> <p><input checked="" type="checkbox"/> The application attached hereto.  <input type="checkbox"/> United States Application No. _____ filed on _____  <input type="checkbox"/> Application No(s) and/or Patent No(s) listed in the attached.</p> <p>including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof and any substitute applications therefor; (2) the full and complete right to file patent applications in the name of the ASSIGNEE, its designee, or in our name as the ASSIGNEE, or its designee's election, on the aforesaid inventions, discoveries and applications in all countries of the world; (3) the entire right, title and interest in and to any Letters Patent which may issue thereon in the United States or in any country, and any renewals, revivals, reissues, reexaminations and extensions thereof, and any patents of confirmation, registration and importation of the same; and (4) the entire right, title and interest in all Convention and Treaty Rights of all kinds thereon, including without limitation all rights of priority in any country of the world, in and to the above inventions, discoveries and applications.</p>	
<b>Name of Assignee</b>	<b>Address</b>
<b>HYUNDAI MOTOR COMPANY</b>	<b>12, Heolleung-ro, Seocho-gu, Seoul 06797, Republic of Korea</b>
<b>Kia Motors Corporation</b>	<b>12, Heolleung-ro, Seocho-gu, Seoul 06797, Republic of Korea</b>
<p>We hereby authorize and request the competent authorities to grant and to issue any and all such Letters Patent in the United States and throughout the world to the ASSIGNEE of the entire right, title and interest therein, as fully and entirely as the same would have been held and enjoyed by us had this assignment, sale and transfer not been made.</p> <p>We agree, at any time, upon the request of the ASSIGNEE, to execute and to deliver to the ASSIGNEE any additional applications for patents for said inventions and discoveries, or any part or parts thereof, and any applications for patents of confirmation, registration and importation based on any Letters Patent issuing on said inventions, discoveries, or applications and divisions, continuations, renewals, revivals, reissues, reexaminations and extensions thereof.</p>	

We further agree at any time to execute and to deliver upon request of the ASSIGNEE such additional documents, if any, as are necessary or desirable to secure patent protection on said inventions, discoveries and applications throughout all countries of the world, and otherwise to do the necessary to give full effect to and to perfect the rights of the ASSIGNEE under this Assignment, including the execution, delivery and procurement of any and all further documents evidencing this assignment, transfer and sale as may be necessary or desirable.

We hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

We further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

Any attorney or agent of record and any registered attorney or agent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., One Financial Center, Boston, MA 02111, telephone (617) 542-6000, is hereby authorized to insert, when known.

Name of Assignor(s)	Signature	Date
KIM, Jinkwan		July 16th, 2019