

PATENT ASSIGNMENT

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| SUBMISSION TYPE: | NEW ASSIGNMENT | | | | | | |
|--|---------------------------------|---------------|----------------|---------------------|------------|-------------------|------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT | | | | | | |
| CONVEYING PARTY DATA | | | | | | | |
| <table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>James H. Pawlow</td> <td>01/09/2013</td> </tr> <tr> <td>Terrence E. Hogan</td> <td>01/09/2013</td> </tr> </tbody> </table> | | Name | Execution Date | James H. Pawlow | 01/09/2013 | Terrence E. Hogan | 01/09/2013 |
| Name | Execution Date | | | | | | |
| James H. Pawlow | 01/09/2013 | | | | | | |
| Terrence E. Hogan | 01/09/2013 | | | | | | |
| RECEIVING PARTY DATA | | | | | | | |
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| State/Country: | JAPAN | | | | | | |
| Postal Code: | 104-8340 | | | | | | |
| PROPERTY NUMBERS Total: 1 | | | | | | | |
| <table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12571889</td> </tr> </tbody> </table> | | Property Type | Number | Application Number: | 12571889 | | |
| Property Type | Number | | | | | | |
| Application Number: | 12571889 | | | | | | |
| CORRESPONDENCE DATA | | | | | | | |
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| ATTORNEY DOCKET NUMBER: | P07110US2A | | | | | | |
| NAME OF SUBMITTER: | Kathie J. Koczyk | | | | | | |
| Total Attachments: 2 source=P07110US2A_ExecutedAssignment#page1.tif source=P07110US2A_ExecutedAssignment#page2.tif | | | | | | | |

CH \$40.00 12571889

ASSIGNMENT

We, James H. Pawlow and Terrence E. Hogan, have made an invention which now is described and claimed in an application for patent entitled NICKEL CATALYST SYSTEM FOR THE PREPARATION OF HIGH CIS POLYBUTADIENE, which application

- is being executed and filed concurrently herewith.
- was filed on October 1, 2009 and now is designated as United States patent application number 12/571,889.

NOW THEREFORE, pursuant to the obligations imposed by or arising under one or more of our employment agreement(s), advisor agreement(s), state or national statutes, common law, and administrative regulation, We hereby do make the following assignments –

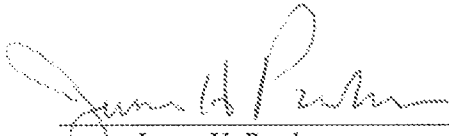
To **BRIDGESTONE CORPORATION**, a corporation created and duly organized under the laws of the nation of Japan and having a place of business at 10-1, Kyobashi 1-Chome, Chuo-Ku, Tokyo, Japan 104-8340, and its successors and assigns, we hereby

- assign, transfer, and set over the full and exclusive right to the above-described invention and to the above-described application for letters patent of the United States as well as any substitute, continuation, continuation-in-part, or divisional application filed thereon, to any application for letters patent of the United States that claims priority from the above-described application, and to any letters patent of the United States that issues from such application(s) as well as any reissue application or request for reexamination filed on such letters patent;
 - covenant and agree for ourselves and our legal representative(s) to
 - a) assist said assignee and/or its designee(s), to the extent requested, in the prosecution of said application for patent, in any interference declared on said application for patent or patent issuing therefrom, or in litigation which arises out of or is based on said application for patent or patent issuing therefrom, and
 - b) execute all papers related to said application for patent which said assignee or its designee(s) request to be signed,
- provided that expenses relating thereto shall be borne by said assignee; and
- authorize and request the Commissioner of Patents and Trademarks to issue any letters patent of the United States relating to the above-described invention in the name of said assignee.

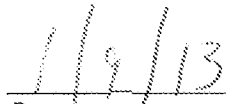
To **BRIDGESTONE CORPORATION**, a corporation created and duly organized under the laws of the nation of Japan and having a place of business at 10-1, Kyobashi 1-Chome, Chuo-Ku, Tokyo, Japan 104-8340, and its successors and assigns, we hereby

- assign, transfer, and set over the full and exclusive right to any application for letters patent filed in any regional or national patent office other than the United States Patent and Trademark Office which application claims priority from the above-described application;
 - covenant and agree for ourselves and our legal representative(s) to
 - a) assist said assignee and/or its designee(s), to the extent requested, in the prosecution of any such applications for patent or in litigation which arises out of or is based on said application(s) for patent or patent(s) issuing therefrom, and
 - b) execute all papers related to said application(s) for patent which said assignee or its designee(s) request to be signed,
- provided that expenses relating thereto shall be borne by said assignee.

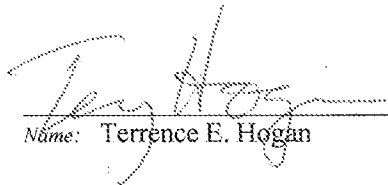
IN WITNESS WHEREOF, I have executed this document on the dates next to our respective names.



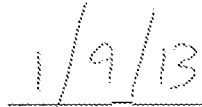
Name: James H. Pawlow



Date



Name: Terrence E. Hogan



Date