

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5277662

|                                                                                                                                                                                                 |                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| <b>SUBMISSION TYPE:</b>                                                                                                                                                                         | NEW ASSIGNMENT                           |
| <b>NATURE OF CONVEYANCE:</b>                                                                                                                                                                    | ASSIGNMENT                               |
| <b>CONVEYING PARTY DATA</b>                                                                                                                                                                     |                                          |
| <b>Name</b>                                                                                                                                                                                     | <b>Execution Date</b>                    |
| AMAR SABOUNDJI                                                                                                                                                                                  | 09/20/2017                               |
| VIRGINIE JAQUET                                                                                                                                                                                 | 09/20/2017                               |
| <b>RECEIVING PARTY DATA</b>                                                                                                                                                                     |                                          |
| <b>Name:</b>                                                                                                                                                                                    | SAFRAN                                   |
| <b>Street Address:</b>                                                                                                                                                                          | 2, BOULEVARD DU GENERAL MARTIAL VALIN    |
| <b>City:</b>                                                                                                                                                                                    | PARIS                                    |
| <b>State/Country:</b>                                                                                                                                                                           | FRANCE                                   |
| <b>Postal Code:</b>                                                                                                                                                                             | 75015                                    |
| <b>PROPERTY NUMBERS Total: 1</b>                                                                                                                                                                |                                          |
| <b>Property Type</b>                                                                                                                                                                            | <b>Number</b>                            |
| <b>Application Number:</b>                                                                                                                                                                      | 16308245                                 |
| <b>CORRESPONDENCE DATA</b>                                                                                                                                                                      |                                          |
| <b>Fax Number:</b>                                                                                                                                                                              | (202)293-7860                            |
| <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>                                                                                                                                                                                   | 202-293-7060                             |
| <b>Email:</b>                                                                                                                                                                                   | bmurray@SUGHRUE.COM, sughrue@sughrue.com |
| <b>Correspondent Name:</b>                                                                                                                                                                      | SUGHRUE MION, PLLC                       |
| <b>Address Line 1:</b>                                                                                                                                                                          | 2100 PENNSYLVANIA AVENUE, N.W.           |
| <b>Address Line 2:</b>                                                                                                                                                                          | SUITE 800                                |
| <b>Address Line 4:</b>                                                                                                                                                                          | WASHINGTON, D.C. 20037-3213              |
| <b>ATTORNEY DOCKET NUMBER:</b>                                                                                                                                                                  | Q243860                                  |
| <b>NAME OF SUBMITTER:</b>                                                                                                                                                                       | BRIAN T. MURRAY                          |
| <b>SIGNATURE:</b>                                                                                                                                                                               | /Brian T. Murray/ New App. Specialist    |
| <b>DATE SIGNED:</b>                                                                                                                                                                             | 12/11/2018                               |
| This document serves as an Oath/Declaration (37 CFR 1.63).                                                                                                                                      |                                          |
| <b>Total Attachments: 2</b>                                                                                                                                                                     |                                          |
| source=Q243860combinedexecutedassignmentanddeclaration#page1.tif                                                                                                                                |                                          |
| source=Q243860combinedexecutedassignmentanddeclaration#page2.tif                                                                                                                                |                                          |

**Worldwide Assignment & US Declaration (37 CFR 1.63)**  
**for utility or design application using an application data sheet (37 CFR 1.76)**

As a below named inventor, I hereby declare that, I

| Inventor Name  | Complete Address                                                                                    |
|----------------|-----------------------------------------------------------------------------------------------------|
| SABOUNDE, Amar | C/o SAFRAN AIRCRAFT ENGINES PI (Ajt) - Rond Point René Ravaud-Réau - 77550 MOISLY CRAMAYEL - FRANCE |

(Hereinafter referred to as the Assignor) have made an invention entitled:

| Title of Invention (in English)                                                            |
|--------------------------------------------------------------------------------------------|
| Process for manufacturing a part made of nickel-based superalloy containing hafnium        |
| Title of Invention (in French)                                                             |
| Procédé de fabrication d'une pièce en superalliage à base de nickel contenant de l'hafnium |

for which an application for Letters Patent has been filed in the following country:

| Country | Filing Date | Serial Number |
|---------|-------------|---------------|
| FRANCE  | JUN-10-2016 | 1655343       |
| PCT     | JUN-09-2017 | FR2017/051475 |

The above-identified application(s) was/were made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

AND, WHEREAS,

| Corporation Name | Complete Address                                        |
|------------------|---------------------------------------------------------|
| SAFRAN           | 2 Boulevard du Général Martial Valin 75015 PARIS FRANCE |
|                  |                                                         |
|                  |                                                         |

(Hereinafter referred to as the Assignee[s]) is/are desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the aforementioned applications for Letters Patent on this invention and the Letters Patent to be issued upon these applications;

NOW THEREFORE, be it known that for and in consideration of One EURO (€1.00) and other good and valuable consideration, the receipt and sufficiency of which from the Assignee[s] is hereby acknowledged, by these presents, I, the Assignor, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer and set over unto the Assignee[s], its/their lawful successors and assigns, my entire right, title, and interest in and to this invention and these applications, and all divisions, and continuations thereof, and all Letters Patent that may be granted thereon, and all reissues thereof, and all rights to claim priority on these or such applications, and all applications for Letters Patent that may hereafter be filed for this invention in any country and all Letters Patent that may be granted on this invention in any country, and all extensions, renewals, and reissues thereof; and I hereby authorize and request the Commissioners of Patents (or other appropriate official whose duty is to issue patents) of the United States, Canada, and any other country, to issue Letters Patent for this invention to the Assignee[s], its/their successors and assigns, in accordance with the terms of this Assignment;

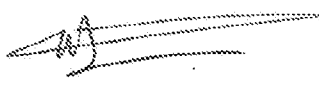
AND, I HEREBY covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I HEREBY further covenant and agree that I will communicate with the Assignee[s], its/their successors and assigns, any facts known to me respecting this invention, testify in any legal proceedings, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee[s], its/their successors or assigns, execute all divisional, continuation, reissue, and re-examination applications, make all rightful oaths and generally do everything possible to aid the Assignee[s], its/their successors and assigns, to obtain and enforce proper patent protection for this invention in any country, it being understood that, irrespective of whether I am in the employ of the Assignee[s] or its/their affiliates, any expense incident to the performance of the obligations of the present paragraph shall be borne by the Assignee[s], its/their successors, and assigns.

This Assignment agreement is effective as of the earliest filing date mentioned above.

AND, I/WE HEREBY acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

IN TESTIMONY WHEREOF, I HAVE SIGNED:

| Date               | Place         | Inventor Name & Signature                                                                             | Witness Name & Signature                                                                                |
|--------------------|---------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| September 19, 2017 | Gennevilliers | SABOUNDE, Amar<br> | JOUBERT HUGUES<br> |

**Worldwide Assignment & US Declaration (37 CFR 1.63)  
for utility or design application using an application data sheet (37 CFR 1.76)**

As a below named inventor, I hereby declare that, I

| Inventor Name     | Complete Address                                                                                     |
|-------------------|------------------------------------------------------------------------------------------------------|
| JAUQUET, Virginie | c/o SAFRAN AIRCRAFT ENGINES PI (AII) - Rond Point René Ravaud-Pérou - 77530 MORSEY CRAMAYEL - FRANCE |

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| Title of Invention (in English)                                                            |
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| Title of Invention (in French)                                                             |
| Procédé de fabrication d'une pièce en superalliage à base de nickel contenant de l'hafnium |

for which an application for Letters Patent has been filed in the following country:

| Country | Filing Date | Serial Number |
|---------|-------------|---------------|
| FRANCE  | JUN-15-2016 | 1655343       |
| PCT     | JUN-09-2017 | FR2017/051475 |

The above-identified application(s) was/were made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

AND, WHEREAS,

| Corporation Name | Complete Address                                        |
|------------------|---------------------------------------------------------|
| SAFRAN           | 2 Boulevard du Général Martial Valin 75015 PARIS FRANCE |
|                  |                                                         |
|                  |                                                         |

(Hereinafter referred to as the Assignee(s)) is/are desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the aforementioned applications for Letters Patent on this invention and the Letters Patent to be issued upon these applications;

NOW THEREFORE, be it known that for and in consideration of One EURO (€1.00) and other good and valuable consideration, the receipt and sufficiency of which from the Assignee(s) is hereby acknowledged, by these presents, I, the Assignor, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer and set over unto the Assignee(s), its/their lawful successors and assigns, my entire right, title, and interest in and to this invention and these applications, and all divisions, and continuations thereof, and all Letters Patent that may be granted thereon, and all reissues thereof, and all rights to claim priority on these or such applications, and all applications for Letters Patent that may hereafter be filed for this invention in any country and all Letters Patent that may be granted on this invention in any country, and all extensions, renewals, and reissues thereof; and I hereby authorize and request the Commissioners of Patents (or other appropriate official whose duty is to issue patents) of the United States, Canada, and any other country, to issue Letters Patent for this invention to the Assignee(s), its/their successors and assigns, in accordance with the terms of this Assignment;

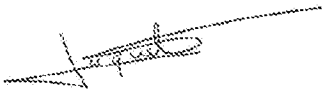
AND, I HEREBY covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I HEREBY further covenant and agree that I will communicate with the Assignee(s), its/their successors and assigns, any facts known to me respecting this invention, testify in any legal proceedings, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee(s), its/their successors or assigns, execute all divisional, continuation, reissue, and re-examination applications, make all rightful oaths and generally do everything possible to aid the Assignee(s), its/their successors and assigns, to obtain and enforce proper patent protection for this invention in any country, it being understood that, irrespective of whether I am in the employ of the Assignee(s) or its/their affiliates, any expense incident to the performance of the obligations of the present paragraph shall be borne by the Assignee(s), its/their successors, and assigns.

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AND, I/WE HEREBY acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

IN TESTIMONY WHEREOF, I HAVE SIGNED:

| Date               | Place         | Inventor Name & Signature                                                                                | Witness Name & Signature                                                                                |
|--------------------|---------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| September 15, 2017 | Gennevilliers | JAUQUET, Virginie<br> | JOUBERT HUGUES<br> |