PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6308515

| SUBMISSION TYPE: | NEW ASSIGNMENT | |
|-----------------------|----------------|--|
| NATURE OF CONVEYANCE: | ASSIGNMENT | |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| BAPTISTE HALLOUIN | 09/15/2020 |
| JEAN-LUC BREINING | 09/15/2020 |
| DAMIEN LABERNY | 09/15/2020 |

RECEIVING PARTY DATA

| Name: | SAFRAN HELICOPTER ENGINES | |
|-----------------|---------------------------|--|
| Street Address: | | |
| City: | BORDES | |
| State/Country: | FRANCE | |
| Postal Code: | 64510 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16982727 |

CORRESPONDENCE DATA

Fax Number: (703)413-2220

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.

Phone: (703) 413-3000 Email: mha@oblon.com **Correspondent Name:** OBLON, ET AL. Address Line 1: 1940 DUKE STREET

Address Line 4: ALEXANDRIA, VIRGINIA 22314

| ATTORNEY DOCKET NUMBER: | 532351US |
|-------------------------|-------------|
| NAME OF SUBMITTER: | MINJEE HA |
| SIGNATURE: | /Minjee Ha/ |
| DATE SIGNED: | 09/21/2020 |

Total Attachments: 3

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> **PATENT** REEL: 053830 FRAME: 0260 506261769

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 | | |
|--|--|---|--|
| MACLOUIN, Baptiste | c/o Safran CEPI - Rond-Point René Ravand –Réau - 77550 MOISSY-CRAMAYEL - FRANCE | | |
| Hereinafter referred to as the Assignor) he | ave made an invention entitled: | | |
| Title of Invention (in English) | | | |
| Turbine stator vane comprising an i | nner cooling wall produced by | additive manufacturing | |
| | | | |
| Title of invention (in French) | | | |
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| | · | | |
| er which an application for Letters Patent | has been filed in the following cour | igak: | |
| Country | Filing Date | Senal Number | |
| France | 03/29/2018 | 1852764 | |
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| | | | |
| he above-identified application(s) was/we | are made or authorized to be made | by me. | |
| | | المراجع | |
| selieve that I am the original inventor or a | in original joint inventor of a claime | ed invention in the application. | |
| ND, WHEREAS, | | | |
| Curporation Name | Complete Address | | |
| Safran Heucopter Engines | \$4510 Bordes France | | |
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| and the second of the second o | | | |
| ieremanter reterred to as the Assigneessi |) is/are desirous of securing the er | rifire right, title, and interest in and to this invention in all countries throughout th | |
| | | rifire right, title, and interest in and to this invention in all countries throughout th is invention and the Letters Patent to be issued upon these applications; | |
| orld, and in and to the alorementioned a | pplications for Letters Patent on th | is invention and the Letters Patent to be issued upon these applications; | |
| orld, and in and to the aforementioned a NOW THEREFORE, be it known | polications for Letters Patent on thi that for and in consideration of | is invention and the Letters Patent to be issued upon these applications; One EURO (£1.00) and other good and valuable consideration, the receipt on | |
| orld, and in and to the aforementioned a NOW THEREFORE, he it known ifficiency of which from the Assignee(s) is | pplications for Letters Patent on the that for and in consideration of hereby acknowledged, by these pr | is invention and the Letters Patent to be issued upon these applications; f One EURO (ELOO) and other good and valuable consideration, the receipt an resents, I, the Assignor, have sold, assigned, transferred, and set over, and do herek | |
| orld, and in and to the aforementioned at NOW THEREFORE, be it known ifficiency of which from the Assignee(s) is all, assign, transfer and set over unto the | polications for Letters Patent on thing that for and in consideration of thereby asknowledged, by these processing the success Assignee(s), its/their lawful success | is invention and the Letters Patent to be issued upon these applications; Fig. Cone. EURO. (ELOC) and other good and valuable consideration, the receipt an resents, I, the Assignor, have sold, assigned, transferred, and set over, and do hereb sors and assigns, my entire right, title, and interest in and to this invention and these | |
| orld, and in and to the aforementioned at NOW THEREFORE, be it known ifficiency of which from the Assignee(s) is il, assign, transfer and set over unto the uplications, and all divisions, and continu | polications for Letters Patent on thing that for and in consideration of a hereby acknowledged, by these processing the strength of the second and the second all the second and all the | is invention and the Letters Patent to be issued upon these applications; Cone EURO (£1.00) and other good and valuable consideration, the receipt an resents, I, the Assignor, have sold, assigned, transferred, and set over, and do herek sors and assigns, my entire right, title, and interest in and to this invention and these tent that may be granted thereon, and all reissues thereof, and all rights to claim. | |
| orld, and in and to the alorementioned at NOW THEREFORE, be it known ifficiency of which from the Assignee(s) is all, assign, transfer and set over unto the opplications, and all divisions, and continu- tority on these of such applications, and a | polications for Letters Patent on thing that for and in consideration of a that for and in consideration of a thereby acknowledged, by these properties its their lawful success the thereof, and all Letters Palall applications for Letters Patent the | is invention and the Letters Patent to be issued upon these applications; I One EURO (ELOO) and other good and valuable consideration, the receipt an resents, I, the Assignor, have sold, assigned, transferred, and set over, and do herek bars and assigns, my entire right, title, and interest in and to this invention and these tent that may be granted thereon, and all reissues thereof, and all rights to claim that may be granted thereon, and all reissues thereof, and all rights to claim the tent of the field for this invention in any country and all Letters Patent the | |
| orld, and in and to the aforementioned at NOW THEREFORE, be it known ifficiency of which from the Assignee(s) is all, assign, transfer and set over unto the, pplications, and all divisions, and continu- ionity on these of such applications, and a ay be granted on this invention in any c | polications for Letters Patent on the n that for and in consideration of thereby acknowledged, by these process Assignmens, its/their lawful success lations thereof, and all Letters Patent the ountry, and all extensions, renewal | is invention and the Letters Patent to be issued upon these applications; One EURO (ELOO) and other good and valuable consideration, the receipt an resents, I, the Assignor, have sold, assigned, transferred, and set over, and do herek sors and assigns, my entire right, title, and interest in and to this invention and these tent that may be granted thereon, and all reissues thereof, and all rights to clair ast may hereafter be filed for this invention in any country and all Letters Patent his time the reissues thereof; and I hereby authorize and request the Commissioners of | |
| orld, and in and to the aforementioned at NOW THEREFORE, be it known ifficiency of which from the Assignee(s) is it, assign, transfer and set over unto the uplications, and all divisions, and continuity on these of such applications, and ay be granted on this invention in any cutents for other appropriate official whost | polications for Letters Patent on thin that for and in consideration of thereby acknowledged, by these process (although the process autions thereof, and all Letters Patent the country, and all extensions for Letters Patent the country, and all extensions, renewall duty is to issue patents) of the University of the U | is invention and the Letters Patent to be issued upon these applications; f. One. EURO. (£1.00) and other good and valuable consideration, the receipt an resents, I, the Assignor, have sold, assigned, transferred, and set over, and do herek ters and assigns, my entire right, title, and interest in and to this invention and these tent that may be granted thereon, and all reissues thereof, and all rights to claim that may be reafter be filed for this invention in any country and all Letters Patent his invention in the results of the Commissioners of the States, Canada, and any other country, to issue Letters Patent for this invention. | |
| orld, and in and to the aforementioned at NOW THEREFORE, be it known ifficiency of which from the Assignee(s) is il, assign, transfer and set over unto the pplications, and all divisions, and continu- iority on these of such applications, and a ay be granted on this invention in any contents for other appropriate official whose the Assignee(s), its/their successors and | polications for Letters Patent on thing that for and in consideration of a thereby acknowledged, by these processing the second of the second and the second all the second all applications for Letters Patent the country, and all extensions, renewall duty is to issue patents) of the Unassigns, in accordance with the territory. | is invention and the Letters Patent to be issued upon these applications; f. One. EURO. (£1.00) and other good and valuable consideration, the receipt an resents, I, the Assignor, have sold, assigned, transferred, and set over, and do herek ters and assigns, my entire right, title, and interest in and to this invention and these tent that may be granted thereon, and all reissues thereof, and all rights to claim that may be reafter be filed for this invention in any country and all Letters Patent his invention in the results of the Commissioners of the States, Canada, and any other country, to issue Letters Patent for this invention. | |

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 fifte to this invention in said Assignee(s), its/their successors or assigns, execute all divisional, continuation, reissue, and reexamination applications, make all rightful caths 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 Assigned(s), its/their successors, and assigns.

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

AND, I/WE HERESY 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:

| Dute | Place | inventor Name & Signature | |
|--------------------|--------|---------------------------|-----------------|
| September 15, 2020 | BORDES | HALLOUIN, Baptiste | Jea ha BREINING |
| | | <u></u> | |

PATENT REEL: 053830 FRAME: 0261

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 | | | |
|--|--|--|--|--|
| BREINING, Jean-Luc | c/o Safran CEPI - Ron | c/o Safran CEPI - Rond-Point René Ravaud - Réau - 77550 MOISSY-CRAMAYEL - FRANCE | | |
| Hereinafter referred to as the Assignor) h | ave made an invention entitled: | | | |
| Title of Invention (in English) | | | | |
| Turbine stator vane comprising an | inner cooling wall produced by | additive manufacturing | | |
| Title of Invention (in French) | | | | |
| | | | | |
| or which an application for Letters Patent | has been filed in the following cou | ntry: | | |
| Country | Filing Date | Serial Number | | |
| France | 03/29/2018 | 1852764 | | |
| | | | | |
| ND, WHEREAS, Corporation Name | Complete Address | | | |
| SAFRAM MELICOPTER ENGINES | 64510 Bordes France | | | |
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| | | | | |
| | | ntire right, title, and interest in and to this levens is invention and the Letters Patent to be issued up | | |
| NOW THEREFORE, be it know sufficiency of which from the Assignee(s) i self, assign, transfer and set over unto the | n that for and in consideration o s hereby acknowledged, by these p Assignee(s), its/their lawful succes | f One EURO (£1.00) and other good and valual resents, I, the Assignor, have sold, assigned, transfors and assigns, my entire right, title, and interestent that may be greated thereon, and all reisst | ble consideration, the receipt an ferred, and set over, and do hereb it in and to this invention and these | |

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 Assignment;

AND, I HEREBY coverant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any

priority on these of such applications, and all applications for Letters Patent that may be reafter be filed for this invention in any country and all Letters Patent that

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 paths and generally do everything possible to ald 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 MEREBY acknowledge that any willful false statement made in this declaration is purishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (S) years, or both.

IN TESTIMONY WHEREOF, I HAVE SIGNED:

agreement in conflict with this Assignment:

| Date | Place | Inventor Name & Signature | Witness Name & Signature |
|--------------------|--------|---------------------------|--------------------------|
| September 15, 2020 | BORDES | BREINING, Joan-Luc | Entite HALLOVIN |

PATENT REEL: 053830 FRAME: 0262

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 | | |
|--|--|--|--|
| LABERNY, Damlen | c/o Safran CEPI - Rond-Point René Ravand - Réau - 77550 MOISSY-CRAMAYEL - FRANCE | | |
| (Hereinafter referred to as the Assignor) h | save made an invention entitled: | | |
| Title of Invention (in English) | | | |
| Turbine stator vane comprising an | inner cooling wall produced by | oy additive manufacturing | |
| Title of Invention (in French) | | | |
| | | | |
| | | | |
| for which an application for Letters Paten | thas been filed in the following cou | unity: | |
| Country | Filing Date | Serial Number | |
| France | 63/53/5878 | 1852784 | |
| | | | |
| The above identified application(s) was/w | rere made or authorized to be made | le by me | |
| thelieve that I am the original inventor or | | | |
| | ao mgost jout ovento o a cions | nea maemua m ata zagmowen. | |
| AND, WHEREAS, | ••••• | | |
| Corporation Name | Complete Address | | |
| SAFRAN HELICOPTER ENGINES | 64510 Bordes France | | |
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| | | | |
| | | | |
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| | | | |
| (Hereinafter referred to as the Assignee): | i)) is/are desirous of securing the e | entire right, title, and interest in and to this invention in all countries throughou | |
| | | his invention and the Letters Patent to be issued upon these applications; | |
| | | of One EURO (€1.00) and other good and valuable consideration, the receipt | |
| | | presents, I, the Assignor, have sold, assigned, transferred, and set over, and do he | |
| | | ssors and assigns, my entire right, title, and interest in and to this invention and t latent that may be granted thereon, and all reissues thereof, and all rights to c | |
| priority on these of such applications, and | all applications for Letters Patent t | that may hereafter be filed for this invention in any country and all Letters Patent | |
| | | vals, and reissues thereof; and I hereby authorize and request the Commissione | |
| ratents (or other appropriate official who to the Assignee(s), its/their successors and | | Juited States, Canada, and any other country, to issue Letters Patent for this inver- erms of this Assignment; | |
| | | nterest assigned by this Assignment, and I have not executed and will not execute | |
| agreement in conflict with this Assignmen | | | |
| AND I HEREBY further covers | int and agree that I will communi | icate with the Assignee[s], its/their successors and assigns, any facts known to | |
| | | pers when called upon to do so, execute and deliver any and all papers that ma | |
| | | (s) its/their successors or assigns, execute all divisional, continuation, reissue, an hing possible to aid the Assignee(s), its/their successors and assigns, to obtain | |
| | | g understood that, irrespective of whether I am in the employ of the Assignee[| |
| its/their affiliates, any expense incident to | | is of the present paragraph shall be borne by the Assignee(s), its/their successors, | |
| 825igus. | ا د المعادي ال | and the second s | |
| | effective as of the earliest filing date | | |
| AND, I/WE HEREBY acknowledges of not more than the 15t years, or both | se that any willful false statement | made in this declaration is punishable under 18 U.S.C. 1901 by fine or imprison | |

Date Place Inventor Name & Signature Witness Name & Signature

LASERNY, Damien Box LAS

PATENT REEL: 053830 FRAME: 0263

RECORDED: 09/21/2020

IN TESTIMONY WHEREOF, I HAVE SIGNED: