



Attestation de Qualification des Procédés Spéciaux

Special Processes Qualification Certificate

N° AQPS : Safran AB-AE-TS / 0913-Rev01

CODE FOURNISSEUR :
SUPPLIER NUMBER MDM 503371Société Safran émettrice :
Issuing Safran company**Safran Aero Boosters**
Safran Aircraft Engines
Safran Transmission Systemsprononce la qualification sur les référentiels indiqués suivant GRP-0087 – GRM-0123.
grants the qualification on the specifications indicated as per GRP-0087 – GRM-0123.

AEROCRAFT HEAT TREATING COMPANY

15701 MINNESOTA AVENUE
PARAMOUNT, CA 90723
USA**Pour les procédés spéciaux suivant, les domaines sont précisés page suivante**
For the following special processes refer to next page for scope definition

Safran Process N°	Procédés Processes	Référentiel Technique Technical Specification	Statut Status	Restrictions techniques Technical limitation	Fin de Validité Expiration Date
12.5.5 12.5.8 12.5.4 12.5.6 12.5.7 12.5.12	Mise en solution / Solution heat treating Traitement de revenu vieillissement / Ageing process Détente / Stress relieving Normalisation / Normalizing Recuit - Homogénéisation/ Homogenization Annealing Traitement trempé / Quenching	Pr-0011 DMP 11	Qualified with restrictions	No HT on aluminium alloys, no HT on finished parts, no HT in class 5 temperature domains, except if specifically allowed.	No end date

N° de rapport Report No.	Observations Remarks
CRQPS RC20170120	Removal of furnaces 1;5;8;10;15;21;24;25 (striked out below).

La validité des qualifications des fournisseurs est confirmée et actualisée par la publication de la liste des procédés spéciaux qualifiés sur le site (AIRCOLLAB : www.boostaerospace.com/aircollab/ L'activation des accès fournisseurs à ce site se fait par demande à l'adresse suivante : saf.admin-gps@safran.fr / The supplier qualification validity is confirmed and updated by the publication of qualified special process list on website (AIRCOLLAB: www.boostaerospace.com/aircollab/). The activations of suppliers access to the website will be done upon request to this following email address: saf.admin-gps@safran.fr

Auditeur/Responsable de la Qualification
Auditor/Qualification Leader

Date :	Name :	Signature :
15-Jun-2017	Romain Copay Safran Aero Booster	

Domaine de Qualification des Procédés Spéciaux

Special Processes Qualification Scope

Identification des installations <i>Facilities identification</i>	Caractéristiques de l'installation <i>Facilities features</i>	Matériau(x) <i>Material(s)</i>	Domaine d'utilisation <i>Operating scope</i>	Commentaires <i>Comments</i>
1	Radiant tubes 108"W x 144"L x 42"H Atmosphere: air Ambient cooling or fan	Steel Nickel base Cobalt base Titanium base	Class 2 – 450°F – 1050°F [±9°F] Class 3 – 1050°F – 1400°F [±15°F] Instrumentation type B	-
3	Open flame 54"W x 108"L x 18"H Atmosphere: air Ambient cooling or fan Oil (60-120°F) or water quench (≤120°F) Transfer time: 45 seconds	Steel Nickel base Cobalt base Titanium base	Class 3 - 1000°F – 1900°F [±15°F] Instrumentation type B	Class 5 not qualified (1950°F- 2150°F [±25°F])
5	Open flame 142"W x 120"L x 24"H Atmosphere: air Ambient cooling or fan Oil (60-120°F) or water quench (≤120°F) Transfer time: 45 seconds	Steel Nickel base Cobalt base Titanium base	Class 3 – 1000°F-2050°F [±15°F] Instrumentation type B	Class 5 not qualified (2050°F- 2250°F [±25°F])
8	Open flame 54"W x 54"L x 18"H Atmosphere: air Ambient cooling or fan Oil (60-120°F) or water quench (≤120°F) Transfer time: 45 seconds	Steel Nickel base Cobalt base Titanium base	Class 3 – 1000°F-2000°F [±15°F] Instrumentation type B	-
9	Open flame 54"W x 108"L x 18"H Atmosphere: air Ambient cooling or fan Oil (60-120°F) or water quench (≤120°F) Transfer time: 45 seconds	Steel Nickel base Cobalt base Titanium base	Class 3 - 1000°F-2000°F [±15°F] Instrumentation type B	-

Identification des installations <i>Facilities identification</i>	Caractéristiques de l'installation <i>Facilities features</i>	Matériau(x) <i>Material(s)</i>	Domaine d'utilisation <i>Operating scope</i>	Commentaires <i>Comments</i>
10	Open flame 54"W x 54"L x 18"H Atmosphere: air Ambient cooling or fan Oil (60-120°F) or water quench ($\leq 120^\circ\text{F}$) Transfer time: 45 seconds	Steel Nickel base Cobalt base Titanium base	Class 3 - 1000°F - 2150°F [$\pm 15^\circ\text{F}$] Instrumentation type B	Class 5 not qualified (2150°F-2250°F [$\pm 25^\circ\text{F}$])
11	Open flame 162"W x 192"L x 48"H Atmosphere: air Ambient cooling or fan	Steel Nickel base Cobalt base Titanium base	Class 2 - 1000°F - 1400°F [$\pm 9^\circ\text{F}$] Class 3 - 1400°F - 1700°F [$\pm 15^\circ\text{F}$] Instrumentation type B	-
12	Open flame 142"W x 120"L x 24"H Atmosphere: air Ambient cooling or fan	Steel Nickel base Cobalt base Titanium base	Class 2 - 1000°F - 1600°F [$\pm 9^\circ\text{F}$] Class 3 - 1600°F - 1900°F [$\pm 15^\circ\text{F}$] Instrumentation type B	-
14	Open flame 200"W x 240"L x 72"H Atmosphere: air Ambient cooling or fan Oil (60-120°F) or water quench ($\leq 120^\circ\text{F}$) Transfer time: 45 seconds	Steel Nickel base Cobalt base Titanium base	Class 3 - 1000°F - 1600°F [$\pm 15^\circ\text{F}$] Class 4 - 1600°F - 2000°F [$\pm 18^\circ\text{F}$] Instrumentation type B	-
15	Open flame 162"W x 192"L x 42"H Atmosphere: air Ambient cooling or fan	Steel Nickel base Cobalt base Titanium base	Class 2 - 1000°F - 1400°F [$\pm 9^\circ\text{F}$] Class 3 - 1400°F - 1700°F [$\pm 15^\circ\text{F}$] Instrumentation type B	-
16	Open flame 240"W x 48"L x 30"H Atmosphere: air Ambient cooling or fan	Steel Nickel base Cobalt base Titanium base	Class 2 - 450°F - 1300°F [$\pm 10^\circ\text{F}$] Instrumentation type B	-

Identification des installations <i>Facilities identification</i>	Caractéristiques de l'installation <i>Facilities features</i>	Matériau(x) <i>Material(s)</i>	Domaine d'utilisation <i>Operating scope</i>	Commentaires <i>Comments</i>
17	Open flame 42"W x 48"L x 24"H Atmosphere: air Ambient cooling or fan	Steel Nickel base Cobalt base Titanium base	Class 2 - 450°F – 1250°F [±10°F] Instrumentation type B	-
20	Radiant tubes 150"W x 192"L x 42"H Atmosphere: air Ambient cooling or fan	Steel Nickel base Cobalt base Titanium base	Class 2 - 450°F - 750°F [±9°F] Class 3 - 750°F – 1400°F [±15°F] Instrumentation type B	-
21	Radiant tubes 142"W x 120"L x 24"H Atmosphere: air Ambient cooling or fan Oil (60-120°F) or water quench (≤120°F) Transfer time: 45 seconds	Steel Nickel base Cobalt base Titanium base	Class 2 – 1000°F – 1400°F [±9°F] Class 3 – 1400°F – 1600°F [±15°F] Instrumentation type B	Class 5 not qualified (1600°F-2150°F [±25°F])
22	Open flame 168"W x 168"L x 54"H Atmosphere: air Ambient cooling or fan Oil (60-120°F) or water quench (≤120°F) Transfer time: 45 seconds	Steel Nickel base Cobalt base Titanium base	Class 3 - 1000°F - 1900°F [±15°F] Class 4 - 1900°F – 2150°F [±18°F] Instrumentation type B	-
24	Open flame 142"W x 120"L x 24"H Atmosphere: air Ambient cooling or fan Oil (60-120°F) or water quench (≤120°F) Transfer time: 45 seconds	Steel Nickel base Cobalt base Titanium base	Class 2 – 1000°F – 1300°F [±9°F] Class 3 – 1300°F – 1900°F [±15°F] Class 4 – 1900°F – 2150°F [±18°F] Instrumentation type B	-
25	Open flame 168"W x 168"L x 54"H Atmosphere: air Ambient cooling or fan	Steel Nickel base Cobalt base Titanium base	Class 3 – 1000°F – 1600°F [±15°F] Class 4 – 1600°F – 1950°F [±18°F] Instrumentation type B	Class 5 not qualified (1950°F-2150°F [±25°F])