

Specific Approval

for Process Certification

MEMO Nº: AM-SUB-092-16 Rev.0**Original issued date:** 16th December 2016**Revision date:** N/A**SUBJECT:** PROCESS QUALIFICATION. HEAT TREATMENT OF INCONEL 718 MATERIAL**SCOPE:** AIRBUS DEFENCE AND SPACE-Military Aircraft- (E.F.A. Program)**APPROVAL:** According to CASA-1400

TRATERCOM S.L.
P.I. PIBO, Avda. Mairena Nº12,
41110, Bollullos de la Mitación
Sevilla, España.

Is hereby approved to perform the following process:

HEAT TREATMENT OF INCONEL 718 MATERIAL (WL2.4668)

According to EN 3666* J85.312, WL2.4668.

LIMITATIONS:

Limited to material Inconel 718 and final state defined in Annex 1, any variation requires new authorization.
Also, Ovens/facilities for the execution of this Heat Treatment shall be certified for Airbus DS according I+D-P-226, and accredited by Nadcap.

COMPLEMENTARY ACTIONS TO BE PERFORMED BY TRATERCOM:

TRATERCOM is responsible for carrying out the necessary periodic tests for the maintenance of this process and keeping updated the dossier of certification.

REFERENCE DOCUMENTATION:

CASA 1400 Rev.2	Airbus DS Doc.	Qualification and certification of Processes.
CASA 1179 Rev.3	Airbus DS Doc.	Assurance and Inspection Tasks in Processes
MTQM-IQ-131015-01 Rev. 0	Airbus DS Doc.	Preliminary approval.
I+D-P-226 Rev. A (Mod.4)	Airbus DS Doc.	Heat treatment of stainless and refractory steels
I+D-E-01 Rev. 0	CASA Doc..	Hardness-Tensile strength tables for ferrous alloys
ASTM E 8	ASTM Doc.	Standard test methods for tension testing of metallic materials.
EN3666*J85.312	Eurofighter Doc.	INCONEL 718 Datasheet.
WL 2.4668	W-L Doc.	High temperature nickel alloy with about 0.05C-19Cr-18Fe-5Nb-3Mo; sheets and strips

REMARKS:

AIRBUS DS-Military Aircraft- does not consider as valid any deviation not expressly stated in this document.

VºB

Signed document in custody of TAQQP- AIRBUS DS Military Aircraft

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Annex 1. Heat Treatment of INCONEL 718 Procedure

1. Heat treatment to .9 of material 2.4668.8 (INCONEL718)
2. Precipitation hardening:
 - a. Hold within a temperature range of 710°C to 730°C for 8 Hours
 - b. Cool down 50°C/h to a temperature within 610 °C to 630°C and hold this temperture range for 8 hours.
 - c. Cool the material in air at room temperature or water, (Applicable specification WL 2.4668)
 - d. Check the heat treatment.
3. Fill in the heat treatment datasheet.
4. Check hardness values in 100% of the treated parts, Acceptance criteria: 45 HRC minimum. (Applicable specification I+D-E-001).
5. Verify according to CASA 1179.
 - Note: Tensile test pannels shall be performed and tested as per ASTM E8, acceptance criteria for maximum theoretical tension: 1550-1750 MPa.
 - Note: This operation must be performed by certified personnel per I+D-P-226.