

APPROVAL

It is hereby certified that the company

Nehlsen-BWB Flugzeug-Galvanik Dresden GmbH & Co. KG

Grenzstraße 2

01109 Dresden

is qualified for following

SPECIAL PROCESSES

- Passivation of austenitic/martensitic corrosion resistant steel
- Cadmium plating of steel and copper alloys
- Chromium passivation
- Dehydrogenation of steels
- Chromic conversion coating of aluminium and aluminium alloys
- Chromic Acid Anodization
- Sulphuric Acid Anodization (Aluminium and Titanium)
- Dyeing + Sealing of anodic layers
- Hard anodizing
- Phosphating
- Coating with paints, general
- Coating with lubricant varnish
- Marking of Parts
- Abrasive blasting cleaning
- Silver Plating

This qualification is granted under the conditions defined in appendices 1-13

RC 2017-07 SPV-2014-08 E

Donauwörth, 2017 July 25th

U. Kleinert

Special Processes Quality Assurance

R. Schnepple

Supplier Quality

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SPECIAL PROCESS: Passivation of austenitic corrosion resistant steel Passivation of martensitic corrosion resistant steel

Performed in accordance with the following documents:

- EI045 35-1200 Passivation of austenitic corrosion resistant steel
- EI045 35-1201 Passivation of martensitic corrosion resistant steel

With the following resources:

n/a

This Qualification is based on the following results:

- AHD Special Processes Audit report 400015459
- QP SPV 2013-03

The Qualification is subject to the following specific conditions:

Permitted deviations in process application as per Permit for Alternative PfA-NFG-003: Electrolytic degreasing agent is "Enprep 1012 Enthone" as per 80-T-35-0030 (Issue06/01).

Restrictions:

None

This qualification could be suspended or cancelled at any time in case of decrease in quality. All modifications initiated by supplier must be submitted to AIRBUS Helicopters Deutschland GmbH for approval. In case of AIRBUS Helicopters Deutschland GmbH documentation revision, modifications have to be implemented or request for deviation has to be submitted to Airbus Helicopters Deutschland GmbH for approval.





SPECIAL PROCESS: Cadmium plating of steel and copper alloys

Chromium passivation

Performed in accordance with the following documents:

- EI045 35-3000 Cadmium plating of steel and copper alloys
- EI045 35-1107 Chromium passivation

With the following resources:

n/a

This Qualification is based on the following results:

- AHD Special Processes Audit report 400015459

- QP SPV 2013-03

The Qualification is subject to the following specific conditions:

Permitted deviations in process application as per Permit for Alternative PfA-NFG-003, PfA-NFG-004, PfA-NFG-005: Electrolytic degreasing agent is "Enprep 1012 Enthone" as per 80-T-35-0030 (Issue06/01). Cleaning solution applied is "P3 Almeco 18" as per 80-T-35-0020 (Issue 10/04)

Restrictions:

None

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SPECIAL PROCESS: Dehydrogenation of steels

Performed in accordance with the following documents:

EI045 36-3300 Dehydrogenation of steels

With the following resources:

n/a

This Qualification is based on the following results:

- AHD Special Processes Audit report 400015459

- QP SPV 2013-03

The Qualification is subject to the following specific conditions:

None

Restrictions:

None

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SPECIAL PROCESS: Chromating of aluminium and aluminium alloys

Performed in accordance with the following documents:

EI045 35-1101 Chromating of aluminium and aluminium alloys

With the following resources:

n/a

This Qualification is based on the following results:

- AHD Special Processes Audit report 400015459

- QP SPV 2013-03

The Qualification is subject to the following specific conditions:

Permitted deviations in process application as per Permit for Alternative PfA-NFG-001: Bath applied for chromating process is "Surtec 655" which is in use as per 80-T-35-1101. Electrolytic degreasing agent is "Enprep 1012 Enthone" as per 80-T-35-0030 (Issue06/01). Cleaning solution applied is "P3 Almeco 18" as per 80-T-35-0020 (Issue 10/04).

Restrictions:

None

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SPECIAL PROCESS: Chromic Acid Anodization (CAA)

Performed in accordance with the following documents:

EI045 35-2100 Chromic Acid Anodization

With the following resources:

n/a

This Qualification is based on the following results:

- AHD Special Processes Audit report 400015459

- QP SPV 2013-03

The Qualification is subject to the following specific conditions:

Permitted deviations in process application as per Permit for Alternative PfA-NFG-002 and PfA-NFG-003, PfA-NFG-004: Electrolytic degreasing agent is "Enprep 1012 Enthone" as per 80-T-35-0030 (Issue06/01). Cleaning solution applied is "P3 Almeco 18" as per 80-T-35-0020 (Issue 10/04) Bath applied for Sealing of anodic layers contents "SH1" as per 80-T-35-2001 (Issue 05/01).

Restrictions:

None

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SPECIAL PROCESS: Sulphuric Acid Anodization (SAA) - (Aluminum and Titanium)

Performed in accordance with the following documents:

- EI045 35-2000Sulphuric Acid Anodization without sealing (of Aluminum and Aluminum Alloys)EI045 35-2002DC Sulphuric Acid Color Anodizing with Sealing
- EI045 35-2500 Anodizing of Titanium and Titanium Alloys

With the following resources:

n/a

This Qualification is based on the following results:

- AHD Special Processes Audit report 400015459
- QP-SPV 2014-08
- QP SPV 2013-03

The Qualification is subject to the following specific conditions:

Permitted deviations in process application as per Permit for Alternative PfA-NFG-002 and PfA-NFG-003, PfA-NFG-004, PfA-NFG-008:

Electrolytic degreasing agent is "Enprep 1012 Enthone" as per 80-T-35-0030 (Issue06/01). Cleaning solution applied is "P3 Almeco 18" as per 80-T-35-0020 (Issue 10/04) Bath applied for Sealing of anodic layers contents "SH1" as per 80-T-35-2001 (Issue 05/01)

Restrictions:

None

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SPECIAL PROCESS: Sealing of anodic layers

Performed in accordance with the following documents:

EI045 35-2001 Sealing of anodic layers

With the following resources:

n/a

This Qualification is based on the following results:

- AHD Special Processes Audit report 400016914

- QP SPV 2013-03
- QP SPV 2014-08

The Qualification is subject to the following specific conditions:

Permitted deviations in process application as per Permit for Alternative PfA-NFG-002: Bath applied for Sealing of anodic layers contents "SH1" as per 80-T-35-2001 (Issue 05/01).

Restrictions:

None

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SPECIAL PROCESS: Hard Anodizing

Performed in accordance with the following documents:

EI045 35-2200 Hard Anodizing

With the following resources:

n/a

This Qualification is based on the following results:

- AHD Special Processes Audit report 400016914
- QP-SPV2014-08

The Qualification is subject to the following specific conditions:

Permitted deviations in process application as per Permit for Alternative PfA-NFG-006: Bath applied for Sealing of anodic layers contents "SH1" as per 80-T-35-2001 (Issue 05/01).

Restrictions:

None

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SPECIAL PROCESS: Phosphating

Performed in accordance with the following documents:

EI045 35-1000 Phosphating

With the following resources:

n/a

This Qualification is based on the following results:

- AHD Special Processes Audit report 400016914

- QP-SPV2014-08

The Qualification is subject to the following specific conditions:

Permitted deviations in process application as per Permit for Alternative PfA-NFG-0010:

Restrictions:

Zink phosphating process without passivation only to be applied on parts which get a paint protection after chemical treatment as per EI045-35-1000 Chapter 5.7.

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SPECIAL PROCESS: Coating with paints, general

Performed in accordance with the following documents:

El045 35-9120 Coating with paints general El045 35-5900 Coating with molybdenum disulfide lubricant varnishes (MoS)2 El045 35-5023 Coating with two-component EP-based Primer, chromate free El045 35-5106 Coating with PUR-based top coat

With the following resources:

n/a

This Qualification is based on the following results:

- AHD Special Processes Audit report 400016914

- QP-SPV2014-08

The Qualification is subject to the following specific conditions:

None

Restrictions:

None

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SPECIAL PROCESS: Labeling with indelible ink

Performed in accordance with the following documents:

EI045 30-0132 Labeling with indelible ink

With the following resources:

n/a

This Qualification is based on the following results:

- AHD Special Processes Audit report 400016914
- QP-SPV2014-08
- Permitted deviations in process application as per Permit for Alternative PfA-NFG-0009:

The Qualification is subject to the following specific conditions:

None

Restrictions:

None

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SPECIAL PROCESS: Abrasive blasting, cleaning

Performed in accordance with the following documents:

EI045 30-0200 Abrasive blasting, cleaning

With the following resources:

n/a

This Qualification is based on the following results:

-AHD Special Processes Audit report 400016914 -QP-SPV2014-08

The Qualification is subject to the following specific conditions:

None

Restrictions:

None

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SPECIAL PROCESS: Silver Plating

Performed in accordance with the following documents:

EI045 35-3307 Silver Plating of steel and non-ferrous metals

With the following resources:

n/a

This Qualification is based on the following results:

Permit for Alternative PfA-NFG-0011

The Qualification is subject to the following specific conditions:

Bending test for adhesion check has to be performed as per 80-LM-35-3307 (bending until sample breaks and evaluation of break area).

Implementation of in-process hardness test of silver layer after 1000 Ah flow rate. Implementation of dehydrogenation tests.

Restrictions:

For proof of process stability of the dehydrogenation process additional samples have to be produced and tested (one per order). After five orders with no negative test result the process will be valid unlimited and number of tests will follow the process instruction which is one test each 3 month and for safety class 1 (critical parts) one test for each lot.

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