INSPECTION REPORT

(Edition 01.01.2025)

Inspection report number .....

1 Anodizing plant

Company name	
Address of the anodizing plant	
Phone number	
E-mail address	
Licence number (if applicable)	
Responsible person	

2 The current inspection visit

Date of this inspection visit	
Name of inspector	
Name of testing institute	

What type of inspection visit is this and what type(s) of anodizing is/are being inspected?

	Architectural anodizing	**Industrial anodizing**	**Decorative anodizing**	**Hard anodizing**
First routine inspection				
Second routine inspection				
Repeat routine inspection				
First inspection for grant of a licence				
Second inspection for grant of a licence				
Repeat inspection for grant of a licence				

	Yes	No
Was an immediate inspection possible?		
Was the inspection visit pre-arranged with the plant?		
Why was an immediate inspection not possible?		
What time elapsed before the inspection started?		
If the inspection visit was pre-arranged, what was the date of the approval from Qualanod?		

	Yes	No
Is this a remote inspection?		
If the inspection is remote, what was the date of the approval from Qualanod?		
If the inspection is remote, what is the approved reason (see Gen. Reg. VII)?		

	Yes	No
Has anything changed in the plant since the last inspection visit?		
What has changed since the last inspection visit?		
Date of the last inspection visit		

	Yes	No
Does the plant have the latest edition of the Specifications and all update sheets (paper copies or internet)?		

3 General

General Regulations: II - Procedure for carrying out inspections of sub-licensees' plants is written for the inspectors. It describes how inspections should be carried out and refers to relevant sections of the Specifications. Note that the Specifications are written for the benefit of the licensee and prospective licensee.

The compliance requirements given below apply to all the types of anodizing unless otherwise stated.

4 Agreement with the customer

4.1 Information supplied by customer

In order to comply with the Specifications, certain information shall be supplied by the customer to the anodizing plant, if necessary in consultation with the aluminium supplier or the anodizing plant or both.

The inspector examines a selection of agreements to verify that each includes all the required information depending on the type of anodizing.

		Included	Not Included	Not applicable
	All types of anodizing			
1	The specification of the aluminium to be anodized (alloy and temper).			
2	The extent of the significant surface(s) of the article to be anodized.			
3	The anodic oxidation coating thickness required.			
4	Any preferred positions and dimensions of the contact (jigging) marks.			
5	Sampling procedure for lot acceptance tests			
	Architectural and decorative anodizing			
6	The intended service use of the article to be anodized.			
7	The surface preparation to be used on the aluminium before anodizing and the limits of variation of the final surface finish.			
8	The colour of the anodized article and the maximum limits of colour variation.			
9	The sealing method to be used.			
	Industrial and hard anodizing			
10	The final dimensional tolerances (if required by the customer)			
11	Any special requirements for surface preparation (e.g. shot-peening, etching, grinding).			
12	Any special requirements for post treatment (e.g. impregnation, grinding, sealing).			
13	Any special characteristics required (e.g. wear resistance, corrosion resistance, microhardness, electrical breakdown potential and electrical insulation).			
	Industrial anodizing			
14	The intended service use of the article to be anodized.			
15	The colour (if any)			
16	The sealing method to be used or no sealing			

Remarks: .....

4.2 Subcontracting

	Yes	No
Does the anodizing plant use subcontractors for anodizing?		

Requirement	OK	Not OK	Not applicable
An anodizing plant shall not sub-contract the whole or a part of a customer's order for licensable products set out in its licence to another anodizing plant unless it is also a licensee authorized to produce such products. This includes other anodizing plants with the same owner.			

What are the subcontractors' licence numbers?	

Remarks: .....

4.3 Complaints

Requirement	OK	Not OK
The anodizing plant shall maintain a register of complaints that adequately describes how complaints have been investigated and actions completed.		

Remarks: .....

5 Processes of anodizing plants

5.1 Pretreatment

	Yes	No
Does the anodizing plant use any mechanical pretreatment process (e.g. blasting, grinding, brushing, buffing, polishing)?		
Does the anodizing plant use a separate degrease before etching?		
Does the anodizing plant use acid etching (e.g. an ammonium bifluoride-based solution)?		
Does the anodizing plant use alkaline etching (e.g. a sodium hydroxide-based solution)?		

Remarks: .....

5.2 Anodizing

Requirement	OK	Not OK	Not applicable
All types of anodizing Anodizing shall be carried out using solutions based on sulfuric acid.			
Architectural anodizing With the exception of oxalic acid, no additives shall be used in anodizing solutions unless approved by Qualanod.			

If the plant uses additives in the anodizing solutions for architectural anodizing, what are their approval numbers (QND xxx)?	

Any additives approved by Qualanod shall be used in accordance with the suppliers' written instructions or, in the absence of such instructions, with the licensee's written standard operating practices.			

How many anodizing lines in the plant are used for production?	
What is the total rectifier capacity of the anodizing plant?	

Requirements from suppliers' written instructions (for the use of anodizing additives)	
Free sulfuric acid concentration	
Dissolved aluminium concentration	
Bath temperature	
Additive concentration	
Working conditions (from production records or by observation)	
What is the free sulfuric acid concentration?	
What is the dissolved aluminium concentration?	
What is the bath temperature?	
What is the additive concentration?	

Remarks: .....

5.3 Colouring

	Yes	No
Are dyes used?		
Is electrolytic colouring used?		

Requirement	OK	Not OK	Not applicable
Architectural, industrial & decorative anodizing Dyes and electrolytic colouring processes shall be used in accordance with the instructions of the supplier or, in the absence of such instructions, with the licensee's written standard operating practices.			
Architectural anodizing For external applications, the quality label shall not be used for black finishes produced using electrolytic colouring with solutions based on copper salts.			

Remarks: .....

5.4 Sealing

	Yes	No
Does the anodizing plant use hot-water sealing?		
Does the anodizing plant use steam sealing?		
Does the anodizing plant use two-step cold sealing using a solution containing nickel fluoride?		
Does the anodizing plant use medium temperature sealing based on a nickel salt solution?		

If the plant uses another type of cold-sealing process, what type is it?	
If the plant uses another type of medium temperature sealing process, what type is it?	
If the plant uses another type of sealing process, what type is it (e.g. sol-gel, glass, polymer)?	

Requirement	OK	Not OK	Not applicable
Architectural anodizing Any sealing process applying a principle other than hot-water, steam or two-step cold sealing using a solution containing nickel fluoride shall not be used unless it has been approved by Qualanod.			

	Yes	No
Does the anodizing plant use sealing processes that require approval? (Preseal solutions based on triethanolamine do not require approval.)		
What are their approval numbers (QND xxx)?		

Remarks: .....

5.4.1 Hot-water sealing

Requirement	OK	Not OK	Not applicable
Architectural, industrial & decorative anodizing For hot-water sealing, the temperature shall not be below 96 °C ten minutes after immersion of the load.			
Architectural anodizing If the anodizing plant uses any additives in a hot-water seal or preseal (e.g. anti-smut additives), they shall be used in accordance with the instructions of the supplier or, in the absence of such instructions, with the licensee's written standard operating practices.			

From production records or by observation	
What is the sealing solution temperature?	
What is the sealing solution pH?	

Remarks: .....

5.4.2 Cold sealing based on nickel fluoride

Suppliers might advise different process parameters.

Requirement **Architectural, industrial & decorative anodizing**	OK	Not OK	Not applicable
Two-step cold sealing processes using solutions containing nickel fluoride shall be used in accordance with the suppliers' written instructions or, in the absence of such instructions, with the licensee's written standard operating practices.			

From production records or by observation	
What is the nickel ion content (first step)?	
What is the fluoride ion content (first step)?	
What is the solution temperature (first step)?	
What is the solution pH (first step)?	
What is the solution temperature (second step)?	

Remarks: .....

5.4.3 Other sealing processes

Requirement	OK	Not OK	Not applicable
Architectural anodizing Other sealing systems, including medium-temperature sealing, that have been approved by Qualanod shall be used in accordance with the suppliers' written instructions or, in the absence of such instructions, with the licensee's written standard operating practices.			

Requirements from suppliers' written instructions	
Sealing solution temperature?	
Sealing solution pH?	
Sealing solution additive concentration?	
From production records or by observation	
What is the sealing solution temperature?	
What is the sealing solution pH?	
What is the sealing solution additive concentration?	

Remarks: .....

5.5 Storage

Requirement	OK	Not OK	Not applicable
All types of anodizing Aluminium products shall be stored away from the anodizing facilities both before and after anodizing. After anodizing, they shall be protected from condensation and dirt.			

Remarks: .....

6 Laboratory and testing equipment

6.1 Facilities

Requirement	OK	Not OK
The anodizing plant shall have laboratory facilities which are in a dedicated room separate from the rest of the anodizing plant and where appropriate conditions are maintained for the tests that are carried out.		
The anodizing plant shall have copies of the ISO standards specifying the tests that it applies or written working instructions based on those standards.		

Remarks: .....

6.2 Instruments for measuring film thickness

Requirement	OK	Not OK
Each anodizing plant shall have at least two instruments for measuring thickness using the eddy current method or one instrument for the eddy current method and one split-beam optical microscope		
Each apparatus shall conform to the requirements of the appropriate standard for the test concerned.		
Each apparatus shall be functional and have a data sheet showing the apparatus identification number and calibration checks including verification that the calibration foils are in good condition.		

The inspector tests the function of the eddy current instruments

		Instrument A		Instrument B	
		Type:		Type:	
		Make:		Make:	
		Model:		Model:	
		No:		No:	
		Standard value	**Measured value**	**Standard value**	**Measured value**
	0 µm range				
	10 µm range				
	20 µm range				

Recommendation for eddy current instruments. Maximum errors: ± 1 µm for 0 µm and 10 µm ranges; ± 1,5 µm for 20 µm range.

Remarks: .....

6.3 Admittance measurement instruments

Requirement **Architectural, industrial (unless not required by customers) & decorative anodizing**	**OK**	**Not OK**	**Not applicable**
If the anodizing plant uses the admittance test, it shall have at least one instrument for measuring admittance and a reference unit for checking the reading accuracy of the instrument.			
Each apparatus shall conform to the requirements of the appropriate standard for the test concerned.			
Each apparatus shall be functional and have a data sheet showing the apparatus identification number and calibration checks.			

The inspector tests the function of the instruments.

		Instrument A		**Reference unit**	
		Make:		Make:	
		Model:		Model:	
		No:		No:	
		Standard value	**Measured value**		
	Y = 3 µS				
	Y = 10 µS				
	Y = 20 µS				
	Y = 200 µS				
Date of most recent maintenance service recorded					

Recommendation for admittance measurement instruments.
Maximum errors: ±1 µS at 3 µS and 10 µS; ±2 µS at 20 µS; ±10 µS at 200 µS.

Remarks: .....

6.4 Dye spot test

Requirement **Architectural, industrial (unless not required by customers) & decorative anodizing**	**OK**	**Not OK**	**Not applicable**
If the anodizing plant uses the dye spot test, it shall have solutions available to carry out the test and a data sheet showing that the pH values of the solutions have been checked at intervals no greater than 3 months and including the pH values measured.			

Remarks: .....

6.5 Mass loss test

Requirement **Architectural, industrial (unless not required by the customers) & decorative anodizing**	**OK**	**Not OK**	**Not applicable**
The anodizing plant shall have the following items to carry out the mass loss test: • analytical balance (readability 0,1 mg) • drying oven • desiccator • heating device • means of agitating the solution • chemical products			
Each item shall conform to the requirements of the appropriate standard for the test concerned.			
Each item shall be functional and, as appropriate, have a data sheet showing its identification number and calibration checks.			

	YES	**NO**
Control of the amount of dissolved aluminium oxide in the test solution (the solution shall not be used after more than 0,5 g of anodic oxidation coating and aluminium have been dissolved per litre of solution)		

The inspector tests the function of the analytical balance using calibrated weights.

Make:		
Model:		
No:		
Date of most recent maintenance service recorded		
Calibrated weights used by inspector for functionality	**Standard value**	**Measured value**
Standard 1		
Standard 2		
	Correct	**Incorrect**
Functionality		

Recommendation for the analytical balance. Maximum deviation of ± 1 mg.

Remarks: ……

6.6 Surface abrasion test

Using standard specimens, the inspector carries out validation tests of the anodizing plant's glass-coated paper (not required if the anodizing plant does not use the surface abrasion resistance test)

Requirement **Architectural anodizing**	**OK**	**Not OK**	**Not applicable**
If the anodizing plant uses the manual test of Specifications 9.6.1, it shall have validated glass-coated paper.			
If the anodizing plant uses the abrasive wheel test of Specifications 9.6.2 and has apparatus in-house, that apparatus shall conform to the requirements of the appropriate standard for the test.			
If the anodizing plant uses the abrasive wheel test of Specifications 9.6.2 and has apparatus in-house, that apparatus shall be functional and, as appropriate, have a data sheet showing the apparatus identification number and calibration checks.			
If an outside organization carries out the abrasive wheel test of Specifications 9.6.2 for the anodizing plant, that organization shall be accredited to ISO 17025 for the test.			

If applicable, give details of the plant's abrasive paper, eg manufacturer, product name, product code, grit size	

Remarks: .....

6.7 pH measurement

Requirement **Architectural, industrial (unless sealing is not required by the customers) & decorative anodizing**	**OK**	**Not OK**	**Not applicable**
The anodizing plant shall have a pH meter and two buffer solutions.			
Each apparatus shall conform to the requirements of the appropriate standard for the test concerned.			
Each apparatus shall be functional and have a data sheet showing the apparatus identification number and calibration checks.			

The inspector tests the function of the pH meter using pH 4 and pH 7 standard test solutions.

Make:		
Model:		
No:		
Deviations from pH values (pH 4 and pH 7)	**Standard value**	**Measured value**

Recommendation for pH meters. Maximum deviation of ± 0,1 pH units.

Remarks: .....

6.8 Wear resistance tests

Requirement **Hard anodizing**	OK	Not OK	Not applicable
The anodizing plant shall have access to apparatus for measuring wear resistance (it does not need to be in-house)			
If the apparatus is in-house, each apparatus shall conform to the requirements of the appropriate standard for the test concerned.			
If the apparatus is in-house, each apparatus shall be functional and have a data sheet showing the apparatus identification number and calibration checks.			
If an external organization carries out the tests, it shall be accredited to ISO 17025 for that test.			

Remarks: .....

6.9 Other product tests

	Yes	No
Are there any other tests required by the customers?		

If “yes”, what are those tests?	

Requirement	OK	Not OK	Not applicable
The anodizing plant shall have access to apparatus to carry out the other product tests (as deemed appropriate by the Specifications for the anodizing type or types of its licence) that are required by the customer. The apparatus does not need to be in-house.			
If the apparatus is in-house, each apparatus shall conform to the requirements of the appropriate standard for the test concerned.			
If the apparatus is in-house, each apparatus shall be functional and have a data sheet showing the apparatus identification number and calibration checks.			
If external organizations carry out the tests, they shall be accredited to ISO 17025 for those tests.			

Remarks: .....

6.10 Competence of plant personnel

In order to comply with the Specifications clause 6, every acceptance test shall be carried out as specified in the Specifications.

The inspector verifies that plant personnel that carry out solution analyses and/or tests on finished products have received proper training or refresher course as appropriate.

	Operator					
	1st	**2nd**	**3rd**	**4th**	**5th**	**6th**
Has instruction been received (verified by documentation)?						
On what date was it received?						
What was the course?						

Remarks: ……

7 In-house control

7.1 Bath temperatures

Depending on the baths present in the plant, the inspector verifies that bath temperatures are monitored correctly.

Requirement	OK	Not OK	Not applicable
Etching bath temperature shall be checked at the beginning of etching each load.			
Brightening bath temperature shall be checked at the beginning of brightening each load.			
Anodizing bath temperature shall be checked at the end of anodizing each load.			
Sealing bath temperature shall be checked 10 minutes after the immersion of the load and recorded			

Remarks: .....

7.2 Bath analyses

Depending on the baths present in the plant, the inspector observes analyses as they are carried out to verify that they are carried out correctly.

Requirement	OK	Not OK	Not applicable
Alkaline etching baths shall be analysed in accordance with the instructions of the supplier of the etch chemicals. In the absence of such instructions, the analysis of free sodium hydroxide, aluminium and, if appropriate, the sequestrant shall be carried out.			
Acid etching baths shall be analysed in accordance with the instructions of the supplier of the etch chemicals or, in the absence of such instructions, with the licensee's written standard operating practices.			
Brightening baths shall be analysed in accordance with the instructions of the supplier of the brightening chemicals or, in the absence of such instructions, with the licensee's written standard operating practices.			
Anodizing baths shall be analysed in accordance with the instructions of the supplier of any anodizing additive. In the absence of such instructions, the analysis of free sulfuric acid and dissolved aluminium shall be carried out.			
Sealing baths, including all baths of multi-step sealing procedures, shall be analysed in accordance with the instructions of the suppliers of the sealing chemicals or, in the absence of such instructions, with the licensee's written standard operating practices.			

Remarks: .....

7.3 Test frequency

The inspector examines the control system to determine whether the correct sampling frequency is maintained and whether all the required information is correctly recorded. Suppliers might advise different frequencies.

Sampling patterns		
L	=	at least once a day for each bath if three shifts are worked per day at least once every two days for each bath if two eight-hour shifts are worked per day at least once every three days for each bath if one eight-hour shift is worked per day at least once every day the line is in use if the bath is in a coil anodizing line
M	=	at least once during every work shift when the line is in use.
N	=	at least twice during every work shift when the line is in use.

Requirement	OK	Not OK	If not OK, frequency from production records	Not applicable
Each etching bath shall be analysed following **sampling pattern L**.				
When a brightening bath is being used, it shall be analysed following **sampling pattern L**.				
Each anodizing bath shall be analysed following **sampling pattern L.**				
Each cold sealing bath shall be analysed following **sampling pattern L.**				
The pH value of all sealing baths, including all baths of multi-step sealing procedures, shall be measured following **sampling pattern N.**				
The temperature of each etching bath, brightening bath, anodizing bath and sealing bath shall be checked following **sampling pattern N.**				
The measurement of coating thickness shall be dealt with in a lot acceptance test and, if specified, using the sampling procedures agreed with the customers. In the absence of such a requirement, coating thickness measurement shall be carried out at least once per flight bar.				
The mass loss test shall be carried out for each sealing bath at least: • once a day if colour-anodized products represent 100% of the total output in the week; • once every two days if colour-anodized products represent more than 50% and less than 100% of the total output in the week; • once a week if colour anodized products represent less than 50% of the total output in the week; • once a day for each coil-anodizing line that is in use.				
If the dye spot / admittance test is used, it shall be carried out for each sealing bath following **sampling pattern M.** For coil-anodizing lines, the dye spot test shall be carried out at least once on every coil.				

If the surface abrasion resistance test is used, it shall be carried out on the finished products from each anodizing tank following **sampling pattern M.**				
For coil-anodizing lines, the coating continuity test shall be carried out at least once on every coil.				
All results shall be entered in charts or some other records.				

How many shifts are worked each day?			
How many days are worked each week?			

Remarks: ……

7.4 Control system

In order to comply with the Specifications, the anodizing plant shall have a secure system for controlling production and its records shall show at least the information in the table below.

The inspector examines the records to verify that they include all the required information.

		Included	Not Included	Not applicable
1	The customer's name and address, order or serial number.			
2	The production date.			
3	The type of anodizing (architectural, industrial, decorative or hard anodizing).			
4	The colour required			
5	The agreed sampling procedure (see Specifications subclause 9.1)			
6	The type of test specimens for product tests (see Specifications subclauses 12.7.1, 13.7.1, 14.7.1 or 15.7.1)			
7	The specified coating thickness and the actual thickness measured (minimum and maximum values of average and local thicknesses).			
8	Final dimensional tolerances.			
9	The results of examinations for visible defects.			
10	The results of the assessment of surface texture and colour.			
11	Evidence that the colouring technique has been demonstrated to produce a product with a light fastness number of at least 8 as defined by the method of the Specifications subclause 9.9.1.			
12	The results of the mass loss test.			
13	The results of the dye spot test or admittance test.			
14	The results of the surface abrasion resistance test.			
15	The results of the wear resistance test.			
16	The results of all other tests required by the customers.			
17	Remedial actions taken in the event of any product test results not meeting the requirements of the test.			
18	The results of analyses and temperature monitoring of etch baths, and the number of shifts worked.			
19	The results of analyses and temperature monitoring of brightening baths, and the number of shifts worked.			
20	The results of analyses and temperature monitoring of anodizing baths, and the number of shifts worked.			
21	The results of analyses and temperature and pH monitoring of sealing baths.			
22	The product name and application of any proprietary chemicals or processes used, for example in sealing.			

Remarks: .....

7.4.1 Historic mass loss data

Architectural, industrial (unless not required by the customer) and decorative anodizing	**mg/dm²**					
	1	**2**	**3**	**4**	**5**	**6**
What are the last six mass loss test results recorded in the control system records?						
Which sealing bath was the sample taken from?						

Remarks: .....

7.5 Traceability

Requirement	**OK**	**Not OK**
The anodizing plant shall specify and maintain procedures to associate the production clearly with the pertinent drawings, specifications or other documents during all phases of production, delivery and assembly. Individual products, lots or batches shall be identified unmistakably. This identification shall be included in the control system records.		

Remarks: .....

8 Inspection of anodized products

8.1 Quantity

Requirement	OK	Not OK
The anodizing plant shall indicate to the inspector which goods have passed the internal quality control and by which type of anodizing they were produced. Goods that are kept in stock ready for dispatch or packed shall be considered to have passed the internal quality control.		
The anodizing plant shall clearly identify parts not produced to conform with the requirements of the Qualanod specifications. The inspector may seek verification of the type of anodizing by, for example, examining the written agreement between the anodizing plant and its customer.		

Is sufficient material available for the thickness tests (see Specifications 8.3.6 Table 1)?	Yes	No	Not applicable
Architectural anodizing			
Industrial anodizing			
Decorative anodizing			
Hard anodizing			

Remarks: .....

8.2 Testing location

The inspector records the location at which the product tests were carried out.

	Method	In licensee's laboratory	In testing institute's laboratory	In another Qualanod-recognized laboratory. Specify location	Not applicable
Mass loss test					
Wear resistance test					

Remarks: .....

8.3 Product test data

The inspector tests products as described, including the sampling scheme, in General Regulations: II - Procedure for carrying out inspections of sub-licensees' plants

Key to tables 1 to 4.	
Work piece	Give an identification number to each work-piece tested from the lot. Add extra rows to the table if necessary.
Local thickness	Enter the average of 3 to 5 single readings taken at each measuring area to the nearest whole micrometre.
Average thickness	Enter the average of the local thicknesses to the nearest whole micrometre.
Sealing tests	**Architectural, industrial (unless not required by the customer for the lot selected) & decorative anodizing** Enter the results of the dye spot or admittance test as required. Ym = Measured admittance value. Y3 = Admittance value corrected for measuring area (133 mm^2), temperature (25 °C) and coating thickness (20 µm). Enter whether the mass loss test followed the method of Specifications 9.3.1 or Specifications 9.3.2. The method of 9.3.1 includes the nitric acid predip while that of 9.3.2 does not.
Dimensional tolerances	If required for the lot selected
Abrasion tests	**Architectural anodizing** Select either the manual test (Specifications 9.6.1) or the abrasive wheel test (Specifications 9.6.2) – required only for lots where all the pieces tested have an average coating thickness of 20 µm or greater. For the manual test, enter whether a dense deposit of chalky white powder was produced.
Anodizing line	Enter the plant's identification of the anodizing line.
Order number	Enter the order number of the order for the work pieces.
Lot size	Enter the number of work pieces in the lot.
Form	Enter the code for the form of the work piece. E = Extrusion: open profile H = Extrusion: hollow profile S = Sheet P = Small part F = Fabricated (a fabricated component is produced by converting a wrought semis product, e.g. extrusion, sheet into some other form, e.g. window frames, door panels etc.)
Thickness class Nominal thickness Specified thickness	**Architectural and decorative anodizing** Enter the specified thickness class, which defines the minimum average thickness. **Industrial anodizing** Enter either the thickness class or the nominal thickness specified by the customer **Hard anodizing** Enter the nominal thickness specified by the customer, which defines the average thickness.
Sealing	Enter the code for the sealing process. S = steam H = hot water N = two-step cold sealing based on a nickel fluoride solution

	M = medium temperature sealing O = other X = no sealing
Clear/coloured	Enter the code for the colour of the work piece. C = Clear (uncoloured) E = Electrolytic coloured D = Dyed I = Integral coloured
Electrodeposit	Enter the symbol for the deposited metal in an electrolytically-coloured work piece (e.g. Sn, Co, Cu, Ni, Se).

If the surface abrasion resistance test is performed by the inspector, give details of the abrasive paper used, e.g. manufacturer, product name, product code, grit size	

Table 1. Architectural anodizing														
Is this table applicable (yes/no)?														
Work piece	**Local thickness (µm)**					**Average thickness (µm)**	**Dye spot test**	**Admittance test**		**Mass loss test**	**Manual test**	**Abrasive wheel test**		
	Measuring area 1	**Measuring area 2**	**Measuring area 3**	**Measuring area 4**	**Measuring area 5**		**Rating**	**Ym (µS)**	**Y3 (µS)**	**Mass loss (mg/dm²)**	**White powder (yes or no)**	**Wear index**		
Anodizing line:			Order number:					Lot size:			Alloy:			
Form:		Thickness class:				Sealing:		Clear/colour:			Electrodeposit:			
1						0								
2						0								
3						0								
4						0								
5						0								
6						0								
7						0								
8						0								
9						0								
10						0								
Anodizing line:			Order number:					Lot size:			Alloy:			
Form:		Thickness class:				Sealing:		Clear/colour:			Electrodeposit:			
11						0								
12						0								
13						0								
14						0								
15						0								
16						0								
17						0								
18						0								
19						0								
20						0								
Anodizing line:			Order number:					Lot size:			Alloy:			
Form:		Thickness class:				Sealing:		Clear/colour:			Electrodeposit:			
21						0								
22						0								
23						0								
24						0								
25						0								
26						0								
27						0								
28						0								
29						0								
30						0								

Table 2. Industrial anodizing														
Is this table applicable (yes/no)?														
Work piece	**Local thickness (µm)**					**Average thickness (µm)**	**Dye spot test**	**Admittance test**		**Mass loss test**				
	Measuring area 1	**Measuring area 2**	**Measuring area 3**	**Measuring area 4**	**Measuring area 5**		**Rating**	**Ym (µS)**	**Y3 (µS)**	**Mass loss (mg/dm²)**				
Anodizing line:			Order number:					Lot size:			Alloy:			
Form:		Specified thickness:				Sealing:		Clear/colour:			Electrodeposit:			
1						0								
2						0								
3						0								
4						0								
5						0								
6						0								
7						0								
8						0								
9						0								
10						0								
Anodizing line:			Order number:					Lot size:			Alloy:			
Form:		Specified thickness:				Sealing:		Clear/colour:			Electrodeposit:			
11						0								
12						0								
13						0								
14						0								
15						0								
16						0								
17						0								
18						0								
19						0								
20						0								
Anodizing line:			Order number:					Lot size:			Alloy:			
Form:		Specified thickness:				Sealing:		Clear/colour:			Electrodeposit:			
21						0								
22						0								
23						0								
24						0								
25						0								
26						0								
27						0								
28						0								
29						0								
30						0								

Table 3. Decorative anodizing														
Is this table applicable (yes/no)?														
Work piece	**Local thickness (µm)**					**Average thickness (µm)**	**Dye spot test**	**Admittance test**		**Mass loss test**				
	Measuring area 1	**Measuring area 2**	**Measuring area 3**	**Measuring area 4**	**Measuring area 5**		**Rating**	**Ym (µS)**	**Y3 (µS)**	**Method of 9.3.1 or 9.3.2**	**Mass loss (mg/dm²)**			
Anodizing line:			Order number:					Lot size:			Alloy:			
Form:		Thickness class:				Sealing:		Clear/colour:			Electrodeposit:			
1						0								
2						0								
3						0								
4						0								
5						0								
6						0								
7						0								
8						0								
9						0								
10						0								
Anodizing line:			Order number:					Lot size:			Alloy:			
Form:		Thickness class:				Sealing:		Clear/colour:			Electrodeposit:			
11						0								
12						0								
13						0								
14						0								
15						0								
16						0								
17						0								
18						0								
19						0								
20						0								
Anodizing line:			Order number:					Lot size:			Alloy:			
Form:		Thickness class:				Sealing:		Clear/colour:			Electrodeposit:			
21						0								
22						0								
23						0								
24						0								
25						0								
26						0								
27						0								
28						0								
29						0								
30						0								

Table 4. Hard anodizing													
Is this table applicable (yes/no)?													
Work piece	**Local thickness (µm)**					**Average thickness (µm)**							
	Measuring area 1	**Measuring area 2**	**Measuring area 3**	**Measuring area 4**	**Measuring area 5**								
Anodizing line:			Order number:					Lot size:				Alloy:		
Form:		Nominal thickness:											
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
Anodizing line:			Order number:					Lot size:				Alloy:		
Form:		Nominal thickness:											
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
Anodizing line:			Order number:					Lot size:				Alloy:		
Form:		Nominal thickness:											
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													

8.4 Summary of coating thickness results

Architectural, industrial (if so specified) & decorative anodizing. Thickness class (minimum average thickness) is specified.				
Lot	**Number of parts tested**	**The specified thickness class**	**Number of parts with an average thickness less than the specified minimum average thickness**	**Number of parts with a local thickness less than 80% of the specified minimum average thickness**

Industrial (if so specified) & hard anodizing. Nominal thickness (average thickness) is specified.				
Lot	**Number of parts tested**	**The specified nominal thickness**	**For a specified nominal thickness up to 50 µm, the number of parts with an average thickness outside ± 20 % of the nominal thickness**	**For a specified nominal thickness over 50 µm, the number of parts with an average thickness outside ± 10 µm of the nominal thickness**

Remarks: .....

8.5 Summary of mass loss test results

At least one mass loss test must be carried out for each anodizing line during each inspection visit. The number of mass loss tests performed in a calendar year shall ensure that at least one mass loss test is carried out for every sealing process in every line used by the anodizer.
If the mass loss test is carried out in the laboratory of the plant, a fresh solution shall be prepared for use over the duration of the inspection visit.

During the inspection, can a mass loss test be carried out for each sealing process in each line used by the anodizing plant?	**Yes**		**No**	
If not, for which sealing process in which line could no mass loss test be performed?				

Architectural, industrial (unless not required by the customer for the lot selected) & decorative anodizing				
Lot	**Anodizing line**	**Sealing process**	**Method of 9.3.1 or 9.3.2**	**Result (mg/dm^2)**

Remarks: .....

8.6 Summary of surface abrasion test results

Architectural anodizing for lots where all the pieces tested have an average coating thickness of 20 µm or greater				
Lot	**Thickness class**	**Method 9.6.1 or 9.6.2**	**If the method of 9.6.1, does the abrasive paper exhibit a dense deposit of chalky white powder? (yes/no)**	**If the method of 9.6.2, does the sample have a wear index less than 1.4? (yes/no)**

Remarks: .....

9 Labelling

The use of the quality label shall comply with the requirements of the Specifications clause 7.

The inspector examines a selection of goods, packaging and documentation that has labels.

Requirement	OK	Not OK	Not applicable
Grant of the licence entitles the holder to use the quality label only for the products set out in the licence.			
The quality label shall only be used for sulfuric acid anodizing of aluminium which conforms to these Specifications.			
The licence holder shall not make any alteration or addition to the quality label when using it.			
The quality label shall be used either in black and white or in blue and white			

Remarks: .....

10 Conclusions

10.1 Inspector's observations

A copy of this section, 10.1, may be left with the licensee after it has been completed and signed.

Inspector's signature and date	
Testing institute	
Signature of the responsible person at the anodizing plant	

Nonconformities					
Potential nonconformities according to the QUALANOD Specifications: **Architectural Chap. 12.11.2** **Industrial Chap. 13.11.2** **Decorative Chap. 14.11.2** **Hard Anodizing Chap. 15.11.2**		**Result**			**Remarks by the anodizing plant**
		OK	Not OK	N/A	
1	Coating thickness results				
2	Mass loss test result(s)				
3	Surface abrasion resistance test result (for average thickness ≥ 20 µm).				
4	Production records				
5	The use of an anodizing solution based on sulfuric acid.				
6	The use of any process or product requiring Qualanod approval				
7	Functional apparatus for measuring coating thickness.				
8	Functional apparatus and availability of the required solutions for the mass loss test.				
9	Functional apparatus and availability of the required solution for the admittance test or the availability of the required solutions for the dye spot test.				
10	Availability of validated glass-coated abrasive paper for surface abrasion resistance testing (if using the test).				
11	Functional apparatus for wear resistance testing				
12	Availability of functional apparatus for any test specified in the Qualanod Specifications and required by the customer.				

N/A = not applicable

Issues List all issues and identify the relevant section of this report (expand table if necessary)			
	New Issues arising from this inspection	**Section**	**Remarks by the anodizing plant**
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
	Issues from the previous inspection that have not been rectified	**Section**	**Remarks by the anodizing plant**
1			
2			
3			
4			
5			
	Issues from the previous inspection that have been rectified	**Section**	**Remarks by the anodizing plant**
1			
2			
3			
4			
5			

10.2 General licensee's conclusions

General licensee's signature and date	
General licensee	

Non-conformities

The confirmation of non-conformities from the inspector's list

	Non-conformity
1	
2	
3	
4	
5	
6	

New Issues

	Issue	Section	Corrective Action Plan received (yes/no)
1			
2			
3			
4			
5			

Issues from previous inspection

List the issues from the previous inspection that have not been rectified and for which a written explanation has been received from the licensee, and whether the explanation was satisfactory (expand the table if necessary)

	Issue	Section	Explanation satisfactory (yes/no)
1			
2			
3			
4			
5			

General licensee's decision on the inspections

	Satisfactory	Unsatisfactory	Not applicable
Architectural anodizing			
Industrial anodizing			
Decorative anodizing			
Hard anodizing			

General licensee's comments	