

Subject :	Assessment of New Products and Processes
Proposal	“Specifications” Working Group
QUALICOAT resolution:	Meetings held in November 2004 and June 2005
Date of application:	22 June 2005
Amendments to the Specifications:	Appendix VI

APPENDIX VI – Assessment of New Products and Processes

(see following pages)

APPENDIX VI - Assessment of New Products and Processes

The Specifications define closely the procedures to be adopted by licensed anodizers. Inspectors ensure that these procedures are being followed. If an anodizer wishes to use a new process or product he should find out from QUALANOD whether it has been previously assessed. If not then he should apply to QUALANOD to have the process or product assessed. This would also apply if a supplier wishes to offer a new process or product for licensed anodizers to use.

The results of the assessment will be evaluated by the QUALANOD Technical Committee. If it decides that the assessment has been successful, then it will recommend to the Executive Committee that, as appropriate, an addendum to the Specifications should be introduced and the Inspectors shall be instructed on new inspection requirements. The applicant will be notified of decisions of the Executive Committee.

The assessment will comprise the following three stages.

- A. The anodizer or supplier (producer) will apply to QUALANOD to have a new process or product tested.
- B. Independent tests will be carried out in a laboratory accredited to EN 17025 and recognized by QUALANOD.
- C. Samples will be subject to outdoor weathering for three years.

The applicant must bear all the costs associated with the sample preparation and testing of Stages B and C.

If a process or product approved by QUALANOD is not used by any anodizer over three years, it is necessary to repeat the laboratory tests following the same procedure as in paragraph B.

A. Application

The producer of a new product or process will apply to the responsible General Licensee or, if there is no national association or General Licensee in the country concerned, directly to QUALANOD's secretariat. The General Licensee will send the application to the QUALANOD secretariat which will then inform the Technical Committee and circulate the application before its next meeting.

The application should be written in English. It should include a description of the process or product and a technical data sheet showing the most important properties. QUALANOD may ask for more information if necessary. The producer may decide whether the application should be handled anonymously in this stage. If so, it should make this clear in its application.

B. Laboratory tests

The national association or QUALANOD will inform the applicant which laboratory should be engaged to conduct the tests.

a) Panel preparation

Special care must be paid to the preparation of samples; they must be free of defects. Due to the fact that the tests are comparative between two processes, it is important that the chemical composition and microstructure of the samples are the same. For this reason, if possible, the samples must come from the same profile or coil.

The samples may be prepared:

- In the laboratory recognised by QUALANOD
- in the supplier's laboratory under the supervision of the person in charge of the laboratory
- In an anodising plant under the supervision of the person in charge of the laboratory and the supplier

Samples produced with the new process or product will be compared with reference samples produced using conventional methods following the Specifications. Unless the Technical Committee decides otherwise, the processing conditions for the reference samples will be as follows.

1. Tests will be performed on EN AW 6063 or 6060 extrusions.
2. Separate samples will be anodized to class 15 and class 20, each class in the same anodizing batch.
3. Different samples of each class will be left in the "natural" condition and coloured to a dark bronze using a tin-based electrolyte.
4. Samples will be sealed in hot water.

Test samples representing the new process or product will be produced using, as far as possible, the same processing conditions as the reference samples.

b) Testing

Each test must be carried out on triplicate samples.

The series of tests will comprise:

- 1. weight loss test according to EN 12373-7 (§ 2.3.3 of the Specifications);**
- 2. admittance value according to EN 12373-5 (§ 2.3.2 of the Specifications);**
- 3. dye spot test according to EN 12373-4 (§ 2.3.1 of the Specifications);**
- 4. measuring the weight loss according to § 2.7 of the Specifications;**
- 5. acetic acid salt spray test according to ISO 9227 (1000 hours) with evaluation according to EN 12373-18 or EN 12373-19.**
- 6. abrasion test according appendix IV**

This means that there will be 8 sets of samples (2 classes x 2 colours x 2 processes) which will go forward for testing. Each set will comprise at least 18 samples including 3 samples for each outdoor exposure location.

The test results will be sent to the applicant and QUALANOD. Before the next meeting of the Technical Committee, the QUALANOD secretariat will compile the results and submit them to the Technical Committee for evaluation. The Technical Committee will decide whether the results comply with the Specifications and recommend whether the assessment should proceed to Stage C.

C. Outdoor exposure

Outdoor exposure tests will be applied to samples produced with the new product or process and reference samples all prepared during Stage B, ie the two thickness classes, and natural and dark bronze finishes. The testing laboratory will arrange for the samples (in triplicate) to be exposed at Genoa and the Hook of Holland for 3 years.

Before exposure a region about 2cm wide at one edge of each sample should be masked off. This will preserve the original appearance and enable any changes in appearance to be assessed after exposure. The samples should not be cleaned during exposure (other than natural rain washing). One sample from each group of three will be withdrawn after 12 months exposure, the remaining two after a further two years.

After the exposure periods (1 and 3 years) the testing laboratory will return the samples without any cleaning to QUALANOD which will submit them to the Technical Committee for evaluation at its next meeting. The Technical Committee will decide whether the results are satisfactory and make recommendations to the Executive Committee accordingly.

QUALANOD may approve the use of the process or product by licensed anodizers on a provisional basis after one year of exposure or after laboratory tests. A final decision whether to grant an approval will be taken after completion of 3 years of exposure.