Guidance on the surface abrasion resistance test of Qualanod specifications 9.6.1

Introduction

Production of the glasspaper originally recommended for this test has ceased. However, quantities of an alternative have been acquired and are now available to licensees as a temporary measure until a more permanent solution to the problem can be found. This new glasspaper is more aggressive than the original paper, which might make the interpretation of the results more difficult. The aim of this document is to provide guidance on performing the test. It draws on ISO 18771 but includes within those instructions further clarification and some differences.

The acceptance criterion is unchanged. “After applying the method of 9.6.1, the abrasive paper shall not exhibit a dense deposit of chalky white powder.” Such a result would indicate that the anodized surface is more wear resistant than glass which is wanted.

Preparation

Wrap a strip of the glasspaper round the supporting rubber block so that the abrasive side lies outwards. Position the strip across the block so that the ends of the strip can be held tightly in place by the thumb and forefinger. Position the strip so that it lies across the leading end of the block. See figure 1.

Performing the test

Applying a light finger-pressure, hold the abrasive strip backed by the block against the anodized surface and, keeping it flat against the surface, make 10 double strokes with amplitude of 25 mm to 30 mm. Keep to the same track along the surface. If the anodic oxidation coating is harder than the glass, the glasspaper slides easily across the surface and the coating is merely burnished. If the glass is harder than the coating, a definite resistance is felt as the glass bites into the coating. An experienced operator can find this “feel” very instructive.

Interpreting the results

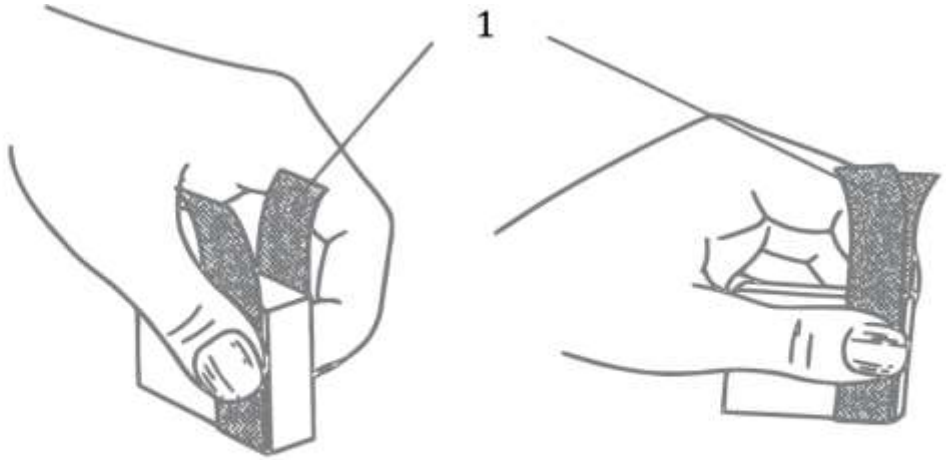
After performing the test, examine that part of the glasspaper which has been in contact with the anodized surface. A dense deposit of chalky, white powder on the surface of the glasspaper, which had been abraded from the anodized surface, indicates that the anodic oxidation coating is softer than the abrasive. Little deposit indicates that the coating is more wear resistant than the abrasive and, thus, the anodized material has satisfied the requirement of the test.

Examples of results are shown in figure 2 where a) and c) indicate unacceptable quality while b) and d) indicate acceptable quality of the anodized products.

Referee test

Note that this method (specifications 9.6.1) is a production control test. It should be carried out only by experienced operators at the anodizing plant; results obtained by others might not be valid.

In cases of doubt or dispute, the method of 9.6.2 is the referee test. It is a comparative test and requires the use of a standard specimen.

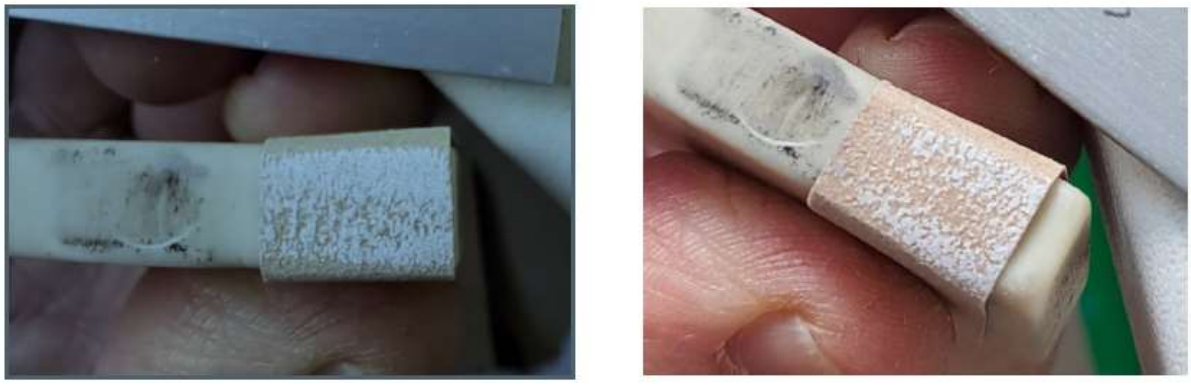


Key

1 tails of paper

Figure 1 — Position of abrasive paper on block

a) b)



c) d)

Figure 2 – Examples of results with the new glasspaper.

Unacceptable: a) and c).

Acceptable: b) and d).