ELECTROLYTIC COATINGS THICKNESS (BY ANODIC DISSOLUTION)

This is a translation, the French original shall be used in all cases of litigation *Date of translation : 13/11/2003*

FOREWORD

This document is in technical conformity with the RENAULT n° 1056 test method.
It must not be modified without prior agreement with RENAULT.
It conforms with the agreement between the Normalisation Services of PEUGEOT S.A. and RENAULT in OCTOBER 1986.

1.OBJECT AND FIELD OF APPLICATION

The object of this method is to define the method of operation to determine, quickly and by destruction, the thickness of a coating of zinc, cadmium, chromium, nickel, copper or tin applied to its conduction support.

2.PRINCIPLE

The equipment used enables the determination of the thickness of the coating by measuring their anodic dissolution time by electrolysis on a determined reference surface.
The electrolysis cell has a calibrated hole which defines this surface.

3.EQUIPMENT

It is recommended to use commercial equipment such as : COULOSCOPE, KOCOUR or failing that a similar piece of equipment.
The different electrolytes to be used are indicated in the notes and are supplied by the equipment manufacturer

4.METHOD OF OPERATION

For all equipment refer to the instructions for use. In particular, attach great importance to the preliminary cleaning of the measurement area as well as to the periodic renewal of the electrolysis; on zinc or cadmium dichromate, eliminate the dichromation. It is also essential to calibrate before any series of tests.
Number and location of the measurements: refer to norme NF A 91-101, paragraphs 1.4.1 et 1.4.4.
In the case of composite coatings such as copper-nickel-chromium, the thickness measurements of the various materials must be carried out in the same spot by successive dissolution of deposits.

5.EXPRESSION OF RESULTS

The values read must be expressed in micrometers, the result being rounded off to the nearest half-micrometer. In test reports, state the type of equipment used.
Example :

Cadmium 5 µm for a measurement carried out with the COULOSCOPE.

6.TEST REPORT

As well as the results obtained, the test report must indicate :

- The reference to this method,
- The type of equipment used,
- The operational details not specified in the method as well as any incidents likely to affect the results.

7.RECORDS AND REFERENCE DOCUMENTS

7.1.RECORDS

7.1.1.CREATION

- OR : 01/12/1986 – CREATION OF THE NORME REPLACING ASSOCIATION NORME N° 1056

7.1.2.SUBJECT OF THE MODIFICATION

- A: 03/02/1997 – INTRODUCTION TO IDEM (French only)
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7.2.REFERENCE DOCUMENTS

7.2.1.PSA DOCUMENTS

7.2.1.1.Normes

7.2.1.2.Others

7.2.2.EXTERNAL DOCUMENTS

NFA91-101 (05/1985)

7.3.EQUIVALENT TO:

REN1056

7.4.CONFORMS TO:

7.5.KEY WORDS