

## PAINT COATINGS

### APPEARANCE EVALUATION BY IMAGE DISTINCTION

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#### NO USE RESTRICTION

This is a translation, the French original shall be used in all cases of litigation

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## 1.OBJECT AND FIELD OF APPLICATION

The object of this method is to describe a mode of operation allowing the appearance of a coating to be evaluated by image distinction (I.D), by integrating all the factors affecting the visual perception of the surface (specular gloss, tension, warping, ...).

The observation is made exclusively on perceptibly flat (radius of curvature greater than 1 metre) and of which the specular gloss, measured in accordance with test method D25 1413, is greater than 40 % at 20 degrees.

## 2.PRINCIPLE

The image, obtained by the reflection of rings called "LANDOLT" on the surface to be evaluated, is examined and graded by the operator.

## 3.EQUIPMENT

### 3.1.LIGHT BOX OR NEGATOSCOPE

(see the principle diagram in the appendix), with dimensions allowing the sight to be positioning (3.2), fitted with a ground glass providing homogeneous lighting over the entire surface. The power of the fluorescent lamp: approximately 15 W.

The frame is fitted with four legs in order to provide a distance of 100 mm between the surface to be measured and the ground glass.

The extremities of the legs must be covered with rubber pads (or equivalent).

**Note:** *This type of box may be obtained, for example, from the following addresses:*

- KOLEN et DELHUMEAU, 7 rue d'Hautpoul, 75019 PARIS - Tél. 01.46.07.62.14 et 01.42.08.83.18.

- INSTRUMENT FOR RESEARCH AND INDUSTRY, 108 Francklin Avenue CHELTENHAM PA 19012/USA.

### 3.2.TRANSPARENT SIGHT

(see appendix), of dimensions 210 x 297 mm, representing the LANDOLT rings; it must be arranged in conformity with the diagram in the appendix (the numbers of the measurement scale in parallel with the large side of the quadrilateral defined by the light box, as close as possible to the edge).

This edge must be considered to be the front of the device.

A clearly visible reference must be drawn parallel to the large side of the quadrilateral, at 115 mm from the front edge.

**Note:** *This sight may be obtained from DAT/CHM/MOA à VELIZY.*

### 3.3.OPAQUE BLACK POLISHED GLASS PLATE

(the secondary masters defined in paragraph 5.2 of test method D25 1413 are particularly suited to this use).

### 3.4.WELL POLISHED PLATE OF SHEET GLASS

thickness 3 mm, coated in finishing paint.

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## 4.MODE OF OPERATION

### 4.1.PRELIMINARY PROCEDURE

- The surfaces to be measured must be clean, dry, and free from contaminations (powder, oil, finger prints, etc.).
- The measurements must be made, preferably in premises with moderate luminous surroundings, any excess lighting causes glare to the operator and thus falsifying results.
- The measurement device having been arranged in conformity with the diagram in the appendix, the operator must place himself so that a reflection angle of 30° is observed, by alignment of the reference mark with the front edge of the light box.

### 4.2.CALIBRATION BY THE OPERATOR

- After switching on the equipment, the operator must place the plate (3.3) under the device and observe the image obtained on the plate.
- From an observation distance of approximately 50 cm, they must move closer until this plate reaches the grading "100", that is, that the opening of the smallest rings become barely perceptible.

### 4.3.MEASUREMENT OF THE SPECIMEN

- Place the specimen to be measured under the equipment and carry out the grading taking care to observe the calibration conditions (angle 30° and distance defined in paragraph 4.2).
- Effect the rating according to paragraph 5.0.

**Note:** *In certain cases (particularly on light and/or highly metallic finishing paints), it may be useful to replace the reference plate (3.3) with the **observation on the reverse of the plate (3.4)** which must be coated with the same finishing paint.*

*Proceed as indicated in paragraphs 4.2 subparagraph 2 and 4.3.*

## 5.EXPRESSION OF RESULTS

The I.D value of surface image distinction observed is read on the visible scale in front of the sight.  
Record the value corresponding to the last row of rings with a visible opening.  
In case of hesitation between two values, a half-value may be used (for example I.D = 75).

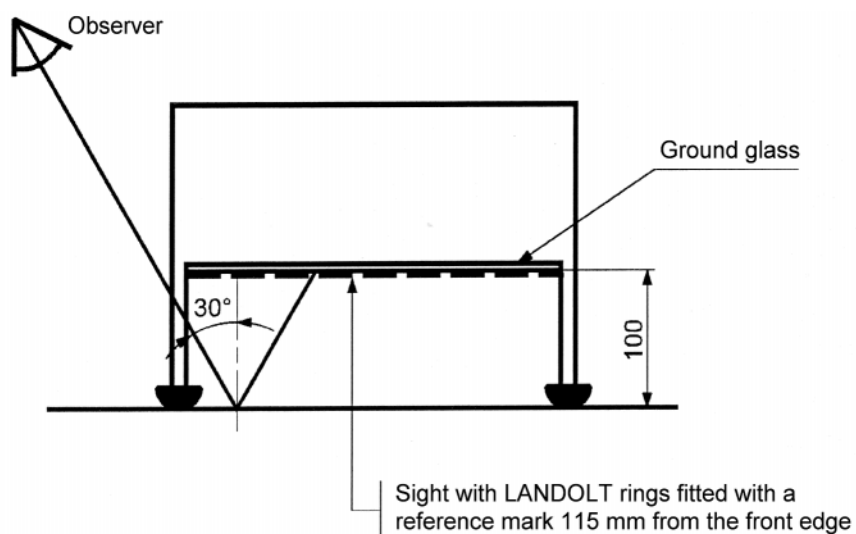
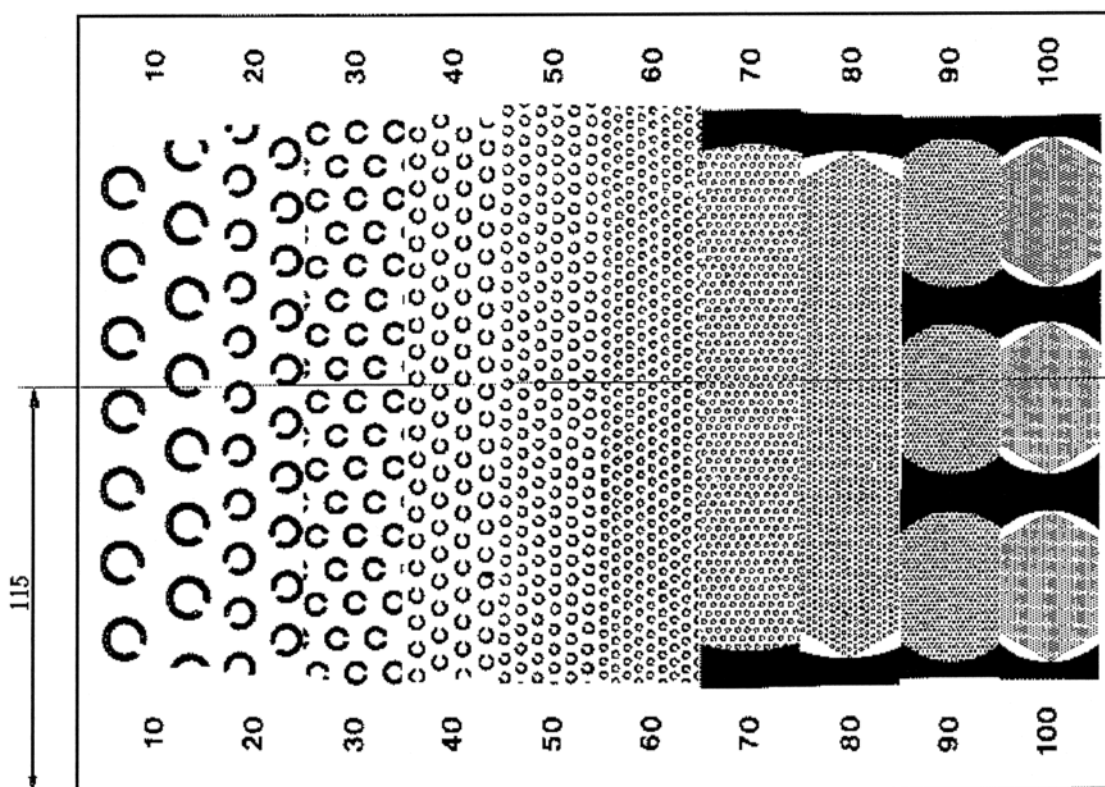
## 6.TEST REPORT

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

- the reference to this method,
- the reference of the paint coating examined,
- the test conditions,
- the operational details not specified in the method as well as any incidents likely to have affected the results.

## APPENDIX

DIAGRAM OF THE LIGHT BOX

*TRANSPARENT SIGHT WITH LANDOLT RINGS (Dimensions 210 x 297 mm)***IMPORTANT:**

The sight image must appear in this position to the observer.

## 7.RECORDS AND REFERENCE DOCUMENTS

### 7.1.RECORDS

#### 7.1.1.CREATION

- OR: 01/05/1987 – CREATION OF THE NORME

#### 7.1.2.SUBJECT OF THE MODIFICATION

- A: 23/07/1997 – INTRODUCTION TO IDEM (French only)
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### 7.2.REFERENCE DOCUMENTS

#### 7.2.1.PSA DOCUMENTS

##### 7.2.1.1.Normes

D25 1413.

##### 7.2.1.2.Others

#### 7.2.2.EXTERNAL DOCUMENTS

### 7.3.EQUIVALENT TO:

### 7.4.CONFORMS TO:

### 7.5.KEY-WORDS