



中华人民共和国国家标准

GB/T 37356—2019/ISO 13076:2012

色漆和清漆 涂层目视评定的 光照条件和方法

Paints and varnishes—Lighting and procedure for visual assessments of coatings

(ISO 13076:2012, IDT)

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国家市场监督管理总局
中国国家标准化管理委员会

发布

前 言

本标准按照 GB/T 1.1—2009 给出的规则起草。

本标准使用翻译法等同采用 ISO 13076:2012《色漆和清漆 涂层目视评定的光照条件和方法》。

本标准由中国石油和化学工业联合会提出。

本标准由全国涂料和颜料标准化技术委员会(SAC/TC 5)归口。

本标准起草单位:中海油常州涂料化工研究院有限公司、中国船舶重工集团公司第七二五研究所厦门材料研究院、标格达精密仪器(广州)有限公司、中航百慕新材料技术工程股份有限公司、浙江鱼童新材料股份有限公司、东莞市恩峰建材科技有限公司、深圳市广田环保涂料有限公司、河北晨阳工贸集团有限公司、佛山市顺德区巴德富实业有限公司、中车唐山机车车辆有限公司、常州光辉新材料研究有限公司、浙江明泉工业涂装有限公司、重庆三峡油漆股份有限公司、株洲市九华新材料涂装实业有限公司、东来涂料技术(上海)股份有限公司、东莞市顾卓精密组件有限公司。

本标准主要起草人:顾辉旗、王崇武、高军、江学志、商汉章、杨亚良、龙凤佳、吴勇、董立志、周才俊、赵绍洪、刘扬、徐仲诚、长孙俊、刘莉春、邓建华。

色漆和清漆 涂层目视评定的 光照条件和方法

1 范围

本标准规定了对涂层表面或涂层内部的老化区域、斑点或其他缺陷进行目视评定的光照条件和方法。

本标准不适用于目视比色,目视比色可按 ISO 3668 的规定进行。

2 原理

在规定的光照条件下,对样板的老化区域、斑点或其他缺陷进行目视评定。

3 仪器设备

日光灯:装有能向下反射光线的镀铝反射膜的广角光源(见图 1),色温为 6 500 K,显色度为 9(对应于显色等级 1 A,即显色指数 R_a 为 90~100)。

注:该色温和显色度对应的灯色为 965。

4 目视评定方法

4.1 总则

自然日光或人造日光都可用于常规评定。由于自然日光并不稳定,在自然日光下评定时会受周围环境的影响,因此仲裁评定应使用精确控制的人造日光,附录 A 给出了进行目视评定的示例。

4.2 自然日光下的评定

评定样板时,最好采用局部多云天气条件下的散射日光,并且样板朝北放置(在南半球时样板朝南放置)。用不低于 2 000 lx 的光照度对待评定区域及其周围区域进行均匀照射。避免阳光直射。

4.3 人造日光下的评定

在第 3 章规定的人造日光下评定涂层。测试时,离光源一定的距离托起样板,使样板表面的光照度不小于 750 lx(见图 1)。

日光灯安装后应测量光照度。

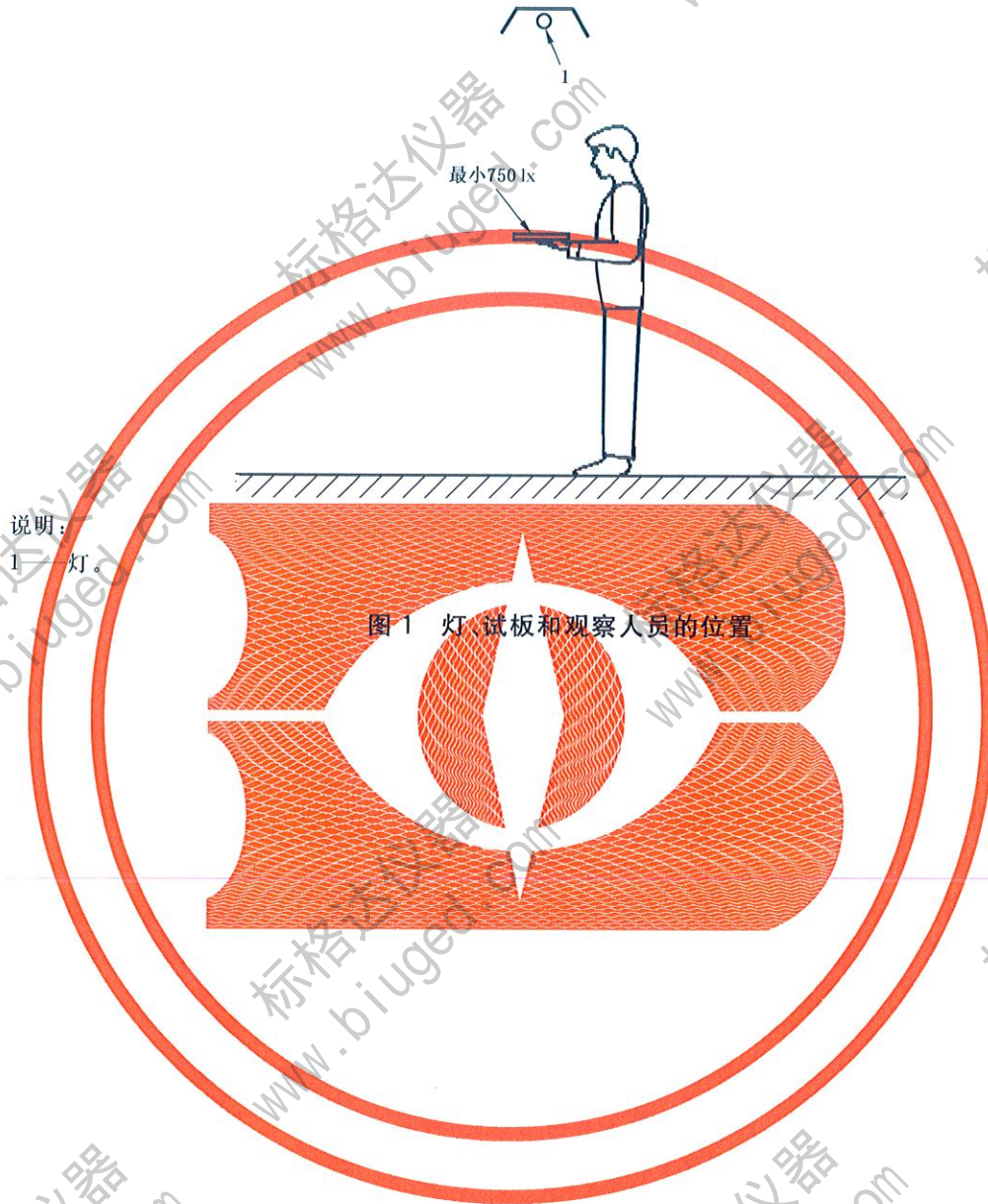
样板评定时可向任何方向倾斜。在灯光产生的明暗交界处检查样板,最易识别样板老化区和斑点。

仲裁评定应在人造日光下进行。

5 试验报告

当使用本标准规定的方法时,试验报告应增加如下信息:

- a) 注明本标准编号(GB/T 37356);
- b) 指出评定试板时采用的光源类型(自然日光或人造日光);若使用人造光源,应给出光源类型的详细信息。



附录 A
(资料性附录)
应用示例

表 A.1 列出了能使用本标准规定的方法进行目视评定的示例。

表 A.1 本标准应用示例

试验方法	标准
划格试验	ISO 2409
耐冲击试验	ISO 6272-1、ISO 6272-2
抗石击性	ISO 20567-1、ISO 20567-2
耐化学介质性	ISO 2812-1、ISO 2812-2、ISO 2812-3、 ISO 2812-4、ISO 2812-5、ISO 15710
涂膜缺陷	ISO 4628-2、ISO 4628-3、ISO 4628-4、 ISO 4628-5、ISO 4628-6、ISO 4628-7、 ISO 4628-8、ISO 4628-10
耐划痕性	ISO 1518-1、ISO 1518-2、ISO 12137
汽车清洗试验	ISO 20066
弯曲试验	ISO 1513、ISO 6860、ISO 17132
干燥试验	ISO 9117-1、ISO 9117-2、ISO 9117-3、 ISO 9117-4、ISO 9117-5、ISO 9117-6
研磨细度	ISO 1524
拉开法附着力试验	ISO 4624
抗流挂性	ISO 16862
与涂装过程有关的涂层体系性能评价	ISO 28199-3
耐湿擦洗性	ISO 11998

参 考 文 献

- [1] ISO 1518-1 Paints and varnishes—Determination of scratch resistance—Part 1: Constant-loading method
- [2] ISO 1518-2 Paints and varnishes—Determination of scratch resistance—Part 2: Variable-loading method
- [3] ISO 1519 Paints and varnishes—Bend test (cylindrical mandrel)
- [4] ISO 1524 Paints, varnishes and printing inks—Determination of fineness of grind
- [5] ISO 2409 Paints and varnishes—Cross-cut test
- [6] ISO 2812-1 Paints and varnishes—Determination of resistance to liquids—Part 1: Immersion in liquids other than water
- [7] ISO 2812-2 Paints and varnishes—Determination of resistance to liquids—Part 2: Water immersion method
- [8] ISO 2812-3 Paints and varnishes—Determination of resistance to liquids—Part 3: Method using an absorbent medium
- [9] ISO 2812-4 Paints and varnishes—Determination of resistance to liquids—Part 4: Spotting methods
- [10] ISO 2812-5 Paints and varnishes—Determination of resistance to liquids—Part 5: Temperaturegradient oven method
- [11] ISO 3668 Paints and varnishes—Visual comparison of the colour of paints
- [12] ISO 4624 Paints and varnishes—Pull-off test for adhesion
- [13] ISO 4628-2 Paints and varnishes—Evaluation of degradation of coatings—Designation of quantity and size of defects, and of intensity of uniform changes in appearance—Part 2: Assessment of degree of blistering
- [14] ISO 4628-3 Paints and varnishes—Evaluation of degradation of coatings—Designation of quantity and size of defects, and of intensity of uniform changes in appearance—Part 3: Assessment of degree of rusting
- [15] ISO 4628-4 Paints and varnishes—Evaluation of degradation of coatings—Designation of quantity and size of defects, and of intensity of uniform changes in appearance—Part 4: Assessment of degree of cracking
- [16] ISO 4628-5 Paints and varnishes—Evaluation of degradation of coatings—Designation of quantity and size of defects, and of intensity of uniform changes in appearance—Part 5: Assessment of degree of flaking
- [17] ISO 4628-6 Paints and varnishes—Evaluation of degradation of coatings—Designation of quantity and size of defects, and of intensity of uniform changes in appearance—Part 6: Assessment of degree of chalking by tape method
- [18] ISO 4628-7 Paints and varnishes—Evaluation of degradation of coatings—Designation of quantity and size of defects, and of intensity of uniform changes in appearance—Part 7: Assessment of degree of chalking by velvet method
- [19] ISO 4628-8 Paints and varnishes—Evaluation of degradation of coatings—Designation of quantity and size of defects, and of intensity of uniform changes in appearance—Part 8: Assessment of degree of delamination and corrosion around a scribe or other artificial defect

- [20] ISO 4628-10 Paints and varnishes—Evaluation of degradation of coatings—Designation of quantity and size of defects, and of intensity of uniform changes in appearance—Part 10: Assessment of degree of filiform corrosion
- [21] ISO 6272-1 Paints and varnishes—Rapid-deformation (impact resistance) tests—Part 1: Falling weight test, large-area indenter
- [22] ISO 6272-2 Paints and varnishes—Rapid-deformation (impact resistance) tests—Part 2: Falling weight test, small-area indenter
- [23] ISO 6860 Paints and varnishes—Bend test (conical mandrel)
- [24] ISO 9117-1 Paints and varnishes—Drying tests—Part 1: Determination of through-dry state and through-dry time
- [25] ISO 9117-2 Paints and varnishes—Drying tests—Part 2: Pressure test for stackability
- [26] ISO 9117-3 Paints and varnishes—Drying tests—Part 3: Surface-drying test using ballotini
- [27] ISO 9117-4 Paints and varnishes—Drying tests—Part 4: Test using a mechanical recorder
- [28] ISO 9117-5 Paints and varnishes—Drying tests—Part 5: Modified Bandow-Wolff test
- [29] ISO 9117-6 Paints and varnishes—Drying tests—Part 6: Print-free test
- [30] ISO 11998 Paints and varnishes—Determination of wet-scrub resistance and cleanability of coatings
- [31] ISO 12137 Paints and varnishes—Determination of mar resistance
- [32] ISO 15710 Paints and varnishes—Corrosion testing by alternate immersion in and removal from a buffered sodium chloride solution
- [33] ISO 16862 Paints and varnishes—Evaluation of sag resistance
- [34] ISO 17132 Paints and varnishes—T-bend test
- [35] ISO 20566 Paints and varnishes—Determination of the scratch resistance of a coating system using a laboratory-scale car wash
- [36] ISO 20567-1 Paints and varnishes—Determination of stone-chip resistance of coatings—Part 1: Multi-impact testing
- [37] ISO 20567-2 Paints and varnishes—Determination of stone-chip resistance of coatings—Part 2: Single-impact test with a guided impact body
- [38] ISO 28199-3 Paints and varnishes—Evaluation of properties of coating systems related to the application process—Part 3: Visual assessment of sagging, formation of bubbles, pinholing and hiding power
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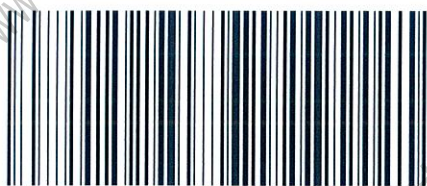
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