

 GOVERNMENT OF DUBAI	Organization/Unit:	إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 بلدية دبي DUBAI MUNICIPALITY
	Document Title:	Type 1 Specific Rules for Hot Dipped Galvanized Coatings on Fabricated Iron and Steel as per BS EN ISO 1461: 2009	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP32-5115 (IC)	رقم الوثيقة :	

Issue Date	Rev. No.	Summary Of Amendments
13-03-2016	0	First draft for comments
04-04-2016	1	Issue for use
11-04-2019	2	Updated format as per new DM template and logo
12/05/2022	3	Format updated with Dubai font. Other updates as highlighted. Alignment with the latest numbering and terminology system in DCLD.

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1. GENERAL

This document is a Specific Rule for a Type 1 certification of the product covered by the Standard Specification defined herewith. The Type 1 certification system is in accordance with ISO 17067 and described in DM-DCLD-RD-DP32-5001 (IC) "General rules for Type 1 product certification scheme".

- 1.1 Type 1a certification shall be issued based on compliance of the sample tested and does not represent any particular quantity, population, or production. DCLD certification body implements Type 1a certification scheme for specific Dubai construction project. Under this scheme, the certification can be issued based on sample brought in by the Project Consultant.
- 1.2 Type 1b certification shall be issued based on compliance of samples selected by DCLD representative in accordance with the sampling plan. The certification covers the specific quantity (or population) of the product defined in the application and represented by the samples subjected to testing.

2. CERTIFICATION REQUIREMENTS

2.1 Standard Specification (SS)

Standard Specification No.	BS EN ISO 1461: 2009
Title of Standard Specification	Hot dip galvanized coatings on fabricated iron and steel articles – Specifications and test methods

2.2 Testing

2.2.1 Number of tests to be carried out on the sample:

Based on the sample selected under clause [2.2], the number of Reference Area(s) to be tested shall be decided in accordance with the SS clause [6.2.3] and SS Table 2 (refer to Annex A.1). The coating thickness in each reference area shall be tested.

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2.2.2 Tests to be carried out

S/N	Properties to be Determined	Test Method	Requirements (Pass/Fail Criteria) as per the SS
1	Thickness of coating (magnetic)	BS EN ISO 1461 and ISO 2178	As per Table 3 or 4 of the SS (whichever is applicable) Refer to Annex A.2
2	Thickness of coating (gravimetric) Applicable only in case of retest or when requested by client)	BS EN ISO 1460	As per Table 3 or 4 of the SS (whichever is applicable) Refer to Annex A.2

2.3 Sampling under Type 1a

2.3.1 Under Type 1a scheme, the sample(s) to be tested shall be submitted to DCLD or their approved laboratory by the Project Consultant or his designated representative.

2.3.2 The quantity of sample to be submitted shall be in accordance with the requirements of the applicable test method(s) and in accordance with DCLD guidance for Type 1a sampling.

2.4 Sampling under Type 1b

2.4.1 The population of the product (batch or lot) shall be defined prior to sampling. The members of the batch shall be of uniform physical description (i.e. same size shape, dimensions, etc.) and shall be distinctly identified by any appropriate means (For example: by production batch number, quantity, production date or code, heat number, markings, dimensions, etc. or a combination of them).

2.4.2 Based on the defined batch or lot to be certified, the DCLD Certification Body shall prepare a "Sampling and testing plan" that will give details of the number of articles/specimen to be selected to comprise the sample to be tested. The preparation of the plan shall be in accordance with the SS clause [5] "Acceptance inspection and sampling" and SS Table 1. The applicant for certification shall agree to the sampling and testing plan.

2.4.3 The sampling and testing plan shall take guidance from DM-DCLD-RD-DP32-5003 (IC) "Guidance for preparing sampling and testing plan"; and shall be prepared in such manner that will provide highest confidence that the sample represents the entire population of product being certified.

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2.4.4 In case the sample fails to meet the requirements, the applicant may request for re-sampling and re-testing from the same batch of products, in accordance with the agreed sampling plan. Testing shall be according to the gravimetric method as mentioned in [2.4.2]. If the new sample again fails to meet the requirements, the product shall be considered non-conforming and the Evaluation Report will be sent to client. No Certificate will be issued.

3. ISSUANCE OF TYPE 1 CERTIFICATE

3.1 Type 1a Certificate of Conformity

- 3.1.1 The Type 1a certificate shall be issued only when results are meeting the applicable requirements as mentioned in clause [2.2].
- 3.1.2 The certificate is applicable only to the product that was subjected to testing. It does not represent any quantity, batch or lot or any subsequent production.
- 3.1.3 The certificate shall be applicable only to a particular project and shall identify the project details such as Project Name, Project Number, Project Consultant, Project Contractor, etc.

3.2 Type 1b Certificate of Conformity

- 3.2.1 The Type 1b certificate shall be issued only when results are meeting the applicable requirements as mentioned in clause [2.2].
- 3.2.2 The certificate is applicable only to the quantity of product defined and identified as per clause [2.4.1]. It does not apply to the entire production of the factory.
- 3.2.3 The Type 1b certificate is valid for one year only.

3.3 The Type 1 certificate shall be issued upon payment of fees in accordance with DM-DCLD-RD-DP32-5002 (IC).

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Annex A Requirements as per Standard Specifications

A.1 Standard Specifications Clause [6.2.3]

6.2.3 Reference areas

The number and position of reference areas and their sizes for the magnetic or gravimetric test shall be chosen with regard to the shapes and sizes of the article(s) in order to obtain a result as representative as possible of mean coating thickness or mass per unit area, as applicable. On a long article in the control sample, the reference areas shall be cut approximately 100 mm from the edges and 100 mm from each end and the approximate centre, and shall comprise the whole cross-section of the article.

The number of reference areas, dependent upon the size of the individual articles in the control sample, shall be as identified in Table 2.

Table 2 — Required number of reference areas for testing

Category	Size of significant surface area	Number of reference areas to be taken per article
a	$> 2 \text{ m}^2$	≥ 3
b	$> 100 \text{ cm}^2$ to $\leq 2 \text{ m}^2$	≥ 1
c	$> 10 \text{ cm}^2$ to $\leq 100 \text{ cm}^2$	1
d	$\leq 10 \text{ cm}^2$	1 on each of N articles
NOTE $2 \text{ m}^2 = 200 \text{ cm} \times 100 \text{ cm}$; $100 \text{ cm}^2 = 10 \text{ cm} \times 10 \text{ cm}$.		

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A.2 Tables for minimum coating thickness and mass

Table 3 — Minimum coating thickness and mass on samples that are not centrifuged

Article and its thickness	Local coating thickness (minimum) ^a μm	Local coating mass (minimum) ^b g/m ²	Mean coating thickness (minimum) ^c μm	Mean coating mass (minimum) ^b g/m ²
Steel > 6 mm	70	505	85	610
Steel > 3 mm to ≤ 6 mm	55	395	70	505
Steel ≥ 1,5 mm to ≤ 3 mm	45	325	55	395
Steel < 1,5 mm	35	250	45	325
Castings ≥ 6 mm	70	505	80	575
Castings < 6 mm	60	430	70	505

NOTE This table is for general use: individual product standards may include different requirements including different categories of thickness. Local coating mass and mean coating mass requirements are set out in this table for reference in such cases of dispute.

^a See 3.8.

^b Equivalent coating mass using a nominal coating density of 7,2 g/cm³ (see Annex D).

^c See 3.9.

Table 4 — Minimum coating thickness and mass on samples that are centrifuged

Article and its thickness	Local coating thickness (minimum) ^a μm	Local coating mass (minimum) ^b g/m ²	Mean coating thickness (minimum) ^c μm	Mean coating mass (minimum) ^b g/m ²
Articles with threads:				
> 6 mm diameter	40	285	50	360
≤ 6 mm diameter	20	145	25	180
Other articles (including castings):				
≥ 3 mm	45	325	55	395
< 3 mm	35	250	45	325

NOTE This table is for general use: fastener coating standards and individual product standards may have different requirements: see also A.2.h). Local coating mass and mean coating mass requirements are set out in this table for reference in such cases of dispute.

^a See 3.8.

^b Equivalent coating mass using a nominal coating density of 7,2 g/cm³ (see Annex D).

^c See 3.9.

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