

 GOVERNMENT OF DUBAI	Organization/Unit:	إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 بلدية دبي DUBAI MUNICIPALITY
	Document Title:	Specific Rules for FA Certification of Steel Bars for Concrete Reinforcement as per ASTM A1035-2015	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP21-2168 (IC)	رقم الوثيقة :	

Issue Date	Rev. No.	Summary Of Amendments
29-04-2008	0	First draft for comments
07-05-2008	0	Final draft
12-05-2008	1	Issue for use
16-08-2009	2	Document reference number and format is changed according to the new IMS, statement for the independent testing plan was changed, and the statement for surveillance was shortened by referring the appropriate procedure, RD-DP21-2096 (IC).
05-05-2010	3	Re issue to modify clause 7.1.3; change the number of samples for testing from 15 to 10 pieces
12-08-010	4	Re issue to incorporate the following: Revision on the current version of the standard (2009); Amended as per new documentation structure; and Specifying clearly the Factory Production Control System (Internal Product Quality Assurance Plan)
22-01-2012	5	Reviewed with the requirements of the current version of the standard (2011) and found to be still suitable. Change the document number of documents upgraded to IMS.
04-10-2015	6	Reviewed with the requirements of the current version of the standard (2015) and identification of the type of steel alloy: CL, CM, CS as per the new version of the standard.
11-03-2019	7	Updated format as per new DM template and new DM logo

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1. GENERAL

1.1 INTRODUCTION

1.1.1 This document prescribes the specific rules for the implementation of the DM Third Party Product Certification System Through Factory Assessment as applied to the specific product(s) identified herein, taking into consideration the applicable normative references and standard specifications.

1.1.2 The applicant shall comply with these specific rules, and to those already mentioned in the “General Rules for DM Third Party Product Certification System Through Factory Assessment” DM-DCLD-RD-DP21- 2001 (IC).

1.2 SCOPE

1.2.1 These specific rules covers low carbon, chromium, steel bars, deformed and plain carbon for concrete reinforcement in cut lengths and coils. Bars covered are of two minimum yield strength levels: 1.) 100 000 psi (690 MPa) & 2.) 120 000 (830 MPa); designated as Grade 100 (690), Grade 120 (830), respectively.

1.2.2 Bars are furnished to three different chemical compositions, designated as Alloy Type CL, CM, and CS

1.3 PRODUCT IDENTIFICATION AND APPLICABLE STANDARD/NORMATIVE REFERENCE

1.3.1 Product Name: Deformed and Plain, Low-carbon, Chromium, Steel Bars for Concrete Reinforcement

1.3.2 Applicable Standard/Normative Reference: **ASTM A 1035/ A 1035M - 15** – Standard Specification for Deformed and Plain, Low-carbon, Chromium, Steel Bars for Concrete Reinforcement

1.3.3 Additional References:

ISO 9001 - Quality Management System –Requirements

ISO 19011 - Guidelines for Quality and Environmental Management System Auditing

1.4 DEFINITION OF TERMS

In addition to the definitions given in **ASTM A 1035/ A 1035M - 15**, and **RD-DP21-2001 (IC)** the following shall also apply:

1.4.1 Independent Testing Laboratory - Dubai Central Laboratory (DCL) or any testing laboratory recognized by the DM Certification Body.

1.4.2 Independent Test – test performed or conducted by an Independent Testing Laboratory

1.4.3 Standard Specification - **ASTM A 1035/ A 1035M - 15**, Standard Specification for Deformed and Plain, Low-carbon, Chromium, Steel Bars for Concrete Reinforcement

1.4.4 Factory Production Control System (Product Quality Assurance Plan) - a document being agreed upon both by the client and the certification body being used to ensure continuous compliance of the certified product.

1.4.5 QMS - Quality Management System aligned with the requirements of ISO 9001 Standard

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2. REQUIREMENTS FOR CERTIFICATION

2.1 APPLICATION

2.1.1 Manufacturers of reinforcing steel bars and coils shall apply to Dubai Central Laboratory through Products Conformity Assessment Section for the certification and authorization to use the DCL Conformity Mark.

2.1.2 Application forms shall be filled-up by the applicant-company and submitted to DCLD together with the following documents

- Trade License
- Complete product description and specifications
- Brief Description of Manufacturing Process
- Copy of the Quality Manual (Controlled Copy)
- Vicinity Map and Factory Layout
- Valid Certification to ISO 9001 (If available)
- List of personnel and their designation

2.2 FACTORY OPERATION

2.2.1 Quality Management System

Manufacturer of reinforcing steel bars and coils shall have a Quality Management System that is aligned to the requirements of ISO 9001 standard. NOTE: Certification to ISO 9001 is not a mandatory requirement.

2.2.2 Laboratory

Manufacturer of reinforcing steel bars and coils shall have a quality assurance laboratory to carry out factory production control testing to ensure that the reinforcing steel bars and coils comply with the requirements of the standard specification.

As a minimum requirement, the laboratory shall have the following testing equipment:

- Calipers and other linear measuring test equipments
- Weighing Scale (with an accuracy of 100 grams)
- Chemical Analyzer
- Tensile Test Equipment
- Bend Test Equipment

2.2.3 Bar Marking Requirements

The manufacturer of reinforcing steel bars and coils shall submit to DCLD a unique bar marking requirements of their products for approval. The DCLD approved mark shall be applied to the products covered by the certification.

Product Marking shall be as per the General Rules on the Markings and Tags of Steel Bars, RD-DP21-2091 (IC).

2.3 INITIAL FACTORY AUDIT

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2.3.1 DCL duly authorized representative shall conduct an audit of the factory quality management system to verify its compliance with the requirements of ISO 9001.

NOTE: An independent certification to ISO 9001 issued by a QMS certification body recognized by DM may be considered as having satisfied this requirement; however, the DM Certification Body reserves the right to carry out verification audit to confirm that the factory is in compliance with the QMS requirements.

2.3.2 Verification audit shall be conducted by designated audit team based on ISO 19011 – Guidelines for Quality and Environment Management System Auditing

2.4 PRODUCT EVALUATION

2.4.1 Sampling Testing

2.4.1.1 Three sets of samples per size within the size range per grade shall be taken randomly. The first set shall be tested in the plant supervised by a duly authorized DCLD-PCAS representative, the second set will be sent to independent testing laboratory. The third set will be kept by the manufacturer as reference for future use.

2.4.1.2 Test sample(s) for independent test shall be identified and signed in the presence of DCL representative and shall be submitted to an independent testing laboratory.

2.4.1.3 Number of Samples for testing shall be at least 10 pieces by one meter length per size within the size range per grade.

2.4.2 Product Evaluation

2.4.2.1 Chemical Composition

2.4.2.1.1 Chemical Analysis of each heat shall be determined in accordance with ASTM A 751, or any equivalent standard.

2.4.2.1.2 Percentages of carbon, manganese, phosphorus, sulfur, silicon, chromium and nitrogen shall be determined and values shall comply with clause 6.2 of the standard specification.

2.4.2.2 Tensile Requirements – Tensile test shall comply with the requirements specify in section 9 of the standard specification.

2.4.2.3 Bending Requirements- Bending test shall comply with the requirements specified in section 10 of the standard specification.

2.4.2.4 Variation in Weight (Mass) – Deformed reinforcing bars shall be evaluated on the basis of nominal weights (mass) and permissible variation shall be in compliance with section 11 of the standard specification.

2.4.2.5 Finish and appearance shall comply with the requirements specified in section 12 of the standard specification.

2.4.2.6 Deformation Requirements – Deformation requirements and measurements – deformation of steel bars products shall comply with the requirements specified under section 7 while measurement of deformation shall be in accordance with section 8 of the standard specification.

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2.4.2.7 Independent test shall only be conducted if the result of the in-plant test shows satisfactory result.

2.4.2.8 If the result of the test conducted by the independent testing laboratory shows non-conformance, the retest shall be carried out on the reference sample kept by the manufacturer or on new samples collected by DM Certification Body , on which full testing shall be carried out, if necessary.

2.4.2.9 If the retest passed, the initial product assessment is considered conforming to product specification. If not, the manufacturer will be advised to take corrective action.

3. GRANTING OF THE DCL CERTIFICATE OF CONFORMITY

3.1 CONDITIONS FOR GRANTING THE DCL CERTIFICATE OF CONFORMITY

3.1.1 When the results of the factory audit (clause 2.3) and product evaluation (clause 2.4) show conformity to the requirements specified in the General Rule and Specific Rule, the license to use the DCL Conformity Mark shall be issued to the manufacturer for the type(s) and size of the product tested.

3.1.2 The factory shall agree with the DM Certification Body for the preparation and implementation of a product quality assurance plan to ensure continuing compliance with the Standard Specifications and the requirements of this certification scheme. It shall consist of (1) an internal product quality assurance plan, and (2) an independent testing plan.

3.1.3 Factory Production Control System (Internal Product Quality Assurance Plan)

The factory shall prepare and submit to DM Certification Body for approval a factory production control system (internal product quality assurance plan).

The plan shall take into consideration the production process, the volume of production, the criticality of the test to be specified, frequency of sampling and testing, and other relevant factors.

Frequency of sampling and testing shall be in accordance with clause 13 of the standard specification.

3.1.4 Independent Testing Plan

The factory shall agree to an independent testing plan to be carried out on samples which are collected in accordance with DM-DCLD-RD-DP21-2096 (IC) – Surveillance of Licensed Establishments under the Factory Assessment Scheme, and implemented by the DM Certification Body. The cost of testing under the independent testing plan shall be borne by the factory.

3.2 ISSUANCE OF DCL CERTIFICATE OF CONFORMITY

If the conditions mentioned in clause 3.1 above have been complied, the manufacturer of reinforcing steel bars and coils shall be issued a DCL Certification License and a Scope of Certification that covers the type(s) and size of the products that are certified.

3.3 RESPONSIBILITIES OF THE CLIENT

3.3.1 Every client shall ensure that his product, for which a license has been issued, conforms at all times to the requirements of the General Rule and Specific Rules and shall maintain to the satisfaction of DCL, a system of quality control including inspection and testing.

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- 3.3.2 The client shall give the duly authorized representative(s) of DCL, access during working hours, without prior notification, to the premises of the factory where certified product is manufactured, for the purpose of evaluating the materials, production processes, finished products, quality assurance facilities, records and others in accordance with the requirements of the scheme.
- 3.3.3 The client shall inform the DM Certification Body in writing of any change of management, transfer of plant site, modification in the product, manufacturing process or factory quality management system.
- 3.3.4 Upon transfer of plant site, the license shall be deemed valid only after factory and product audit at the new site has been satisfactorily completed.
- 3.3.5 Any infraction stated in the Terms and Conditions for the use of DCL Conformity Mark shall constitute sufficient grounds for suspension, withdrawal and cancellation of the license against a client.
- 3.3.6 Any dispute that may arise in connection with the Terms and Conditions of the DCL Mark shall be settled in accordance with DM-DCLD-IMS-RD-08 Appeals, Disputes, and Complaints Procedure.
- 3.3.7 The client shall pay all applicable fees related to the certification process.
- 3.4 **USE OF THE DCL CONFORMITY MARK**
- 3.4.1 The design and use of the DCL Conformity Mark shall be in accordance with the Terms and Conditions for the Use of the DCL Conformity Mark, DM-DCLD-IMS-RD-13.
- 3.4.2 The client shall submit samples of tag showing the DCL Conformity Mark, for approval by the DM Certification Body.
- 3.4.3 The license to use the DCL Certification Mark is non-transferable.
4. **SURVEILLANCE**
- 4.1 DM Certification Body shall carry out periodic surveillance to ensure consistent compliance with the requirements of this certification scheme as per DM-DCLD-RD-DP21-2096 (IC) – Surveillance of Licensed Establishments under the Factory Assessment Scheme.
- 4.2 The surveillance shall be in accordance with the Independent Testing Plan (clause 3.1.4) that has been agreed between the DCLD and the factory.
5. **FEE SCHEDULE**
- 5.1 The client shall pay the applicable fees and charges related to the granting of the license to use the DCL Conformity Mark based on the Fee structure for the control of reinforcing steel bars in the Emirate of Dubai, DM-DCLD-RD-DP21-2092 (IC).

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