

	Organization/Unit:	إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:
	Document Title:	Specific Rules for FA Certification of Steel for Reinforcement of Concrete as per ISO 6935-2: 2019	عنوان الوثيقة:
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Issue Date	Rev. No.	Summary Of Amendments
27-12-2012	0	First draft for comments
06-01-2013	0	Final draft
09-01-2013	1	Issue for use
26-02-2017	2	Reviewed with the requirements of the current version of the standard (ISO 6935-2:
		2015) and found to be still suitable. Likewise, change the name of the section from
		Inspection and Certification Section to Products Conformity Assessment Section and the
		licensee by client.
11-03-2019	3	Updated format as per new DM template and new DM logo
11-05-2020	4	Revised to align with the new version of standard ISO 6935-2:2019 In addition to some
		editorial changes as per the new numbering Scheme and Terminologies.
21-07-2020	5	Add the options for initial audit by the approved CAB and remotely by PCAS. Adding
		definition for authorized auditor. Update for the new numbering system and followed
		terminologies. Correction of numbering. Add provision for accepting valid test reports
26-09-2021	6	Removal of the documents in clause 2.1.2, in addition to further amendment in the
		provision for accepting valid test reports (clause 2.4.2.4), in line with DM 30% reduction
		of requirements (both service and specialized). Modifications in the auditing part for the
		factories already certified against ISO 9001 to opt for auditing only the areas of
		production and monitoring stages of product realization, quality control and final product
		testing and evaluation.

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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 Scheme 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 Scheme Through Factory Assessment "DM-DCLD-RD-RD-DP21- 2001 (IC)".

## 1.2 SCOPE

1.2.1 This specific rule covers requirements for ribbed steel bars for reinforcement of concrete. It cover thirteen steel grades not intended for welding which are B300A-R, B300B-R, B300C-R, B300D-R,B400A-R, B400B-R, B400C-R, B500A-R, B500B-R, B500C-R, B600A-R, B600B-R & B600C-R, and thirteen steel grades intended for welding which are B300DWR, B350DWR, B400AWR, B400BWR, B400CWR, B400DWR, B420DWR, B450AWR, B450CWR,B500AWR, B500BWR,B500CWR & B500DWR. The steel grades are designated with steel names allocated in accordance with ISI/TS 4949. This part of 6935 covers products delivered in straight lengths.

### 1.3 PRODUCT IDENTIFICATION AND APPLICABLE STANDARD/NORMATIVE REFERENCE

1.3.1 Product Name: Steel for the reinforcement of concrete- Ribbed bars

1.3.2 Applicable standard/Normative reference: ISO 6935-2:2019 – Steel for the reinforcement of concrete-

Part 2: Ribbed bars

1.3.3 Additional References:

ISO 9001 - Quality Management System - RequirementsISO 19011 - Guidelines for Auditing Management System.

## 1.4 DEFINITION OF TERMS

In addition to the definitions given in ISO 6935-2: 2019 and DM-DCLD-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 (DCLD-PCAS).

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- 1.4.2 Independent Test test performed or conducted by the recognized Independent Testing Laboratory or any testing laboratory recognized by (DCLD-PCAS).
- 1.4.3 Standard Specification ISO 6935-2:2019- Steel for the reinforcement of concrete- Part 2: Ribbed bar
- 1.4.4 Factory Production Control System (Product Quality Assurance Plan) a document being agreed upon both by the client and the (DCLD-PCAS) 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.
- 1.4.6 Client: Manufacturer/ producer of Steel for reinforcement of concrete.
- 1.4.7 DM Certification Body: Dubai Central Laboratory Department-Products Conformity Assessment Section- (DCLD-PCAS).
- 1.4.8 Authorized auditor: is any approved auditor by DCLD-PCAS either internal within DCLD or external (Approved CAB's auditor or approved auditor based on a signed contract)

## 2. REQUIREMENTS FOR CERTIFICATION

- 2.1 APPLICATION
- 2.1.1 The client shall apply to DCLD-PCAS for the Certification and the authorization to use the DCL Conformity Mark.
- 2.1.2 Application form shall be submitted by client to DCLD-PCAS
- 2.1.3 Separate application shall be submitted for each product type or group of products that refers to a different specific rules
- 2.2 FACTORY OPERATION
- 2.2.1 Quality Management System

The client shall have a Quality Management System that is aligned to the requirements of ISO 9001 standard. NOTE: Having a certificate of ISO 9001 is not a mandatory requirement; however the structure of the client's QMS shall be in line with its requirements.

# 2.2.2 Laboratory

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The client 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:

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

# 2.2.3 Bar Marking Requirements

The client shall submit to DCLD-PCAS a unique bar marking requirements of their products for approval. The DCLD-PCAS 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, DM-DCLD-RD-DP21-2091 (IC) and clause 11 of the standard specification.

#### 2.3 INITIAL FACTORY AUDIT

2.3.1 Initial factory audit will be carried out by duly authorized auditor(s) which will cover auditing of the quality management system to verify its compliance with the requirements of ISO 9001, in addition to verify the implementation of DCLD-PCAS certification's requirements. Where possible; the audit can be carried out remotely as per (DM-DCLD-RD-DP21-2098 (IC) Guidelines for Remote Audit) or as per the related approved guidelines which are followed by the approved outsourced CAB.

NOTE: An independent certification to ISO 9001 issued by a QMS certification body recognized by DCLD-PCAS may be considered as having satisfied this requirement; however, DCLD-PCAS may still opt to carry out verification audit to confirm that the factory is in compliance with requirements of DCLD certification schemes and rules, mainly the areas of production and monitoring stages of product realization, quality control and final product testing and evaluation.

2.3.2 Factory audit shall be conducted by designated audit team in accordance with ISO 19011 – Guidelines for Auditing Management Systems.

#### 2.4 PRODUCT EVALUATION

# 2.4.1 Sampling and Testing

2.4.1.1 Sampling for initial testing shall be shall be taken randomly by the authorized auditor from the products to

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be certified (sizes and quantities to be determined) either from production lines or the factory warehouse.

- 2.4.1.2 Three sets of samples per size within the size range shall be taken randomly. The first set, where possible, will be tested in the plant supervised by a duly authorized auditor, the second set will be sent to DCLD-PCAS approved independent testing laboratory. The third set will be kept by the client as reference for future use.
- 2.4.1.3 Sample(s) for independent test shall be identified and signed in the presence of the authorized auditor and shall be submitted to DCLD-PCAS approved lab.
- 2.4.1.4 Number of Samples for testing should be at least 10 pieces by one meter length per size within the size range per grade or as required by the independent testing laboratory.
- 2.4.2 Product Evaluation and testing
- 2.4.2.1 The product shall conform to the requirements as specified in clauses 5, 6,7, 8, 10 and 11 of the standard specification.
- 2.4.2.2 Tests to be carried out in accordance with the standard specification requirements (refer also to clause 9) and shall have values as follow;
  - 2.4.2.2.1 Dimensions, mass per unit length and permissible deviation shall be as per Table 2.
  - 2.4.2.2.2 Nominal length shall not deviate by +100 mm and no negative tolerance or as agreed at the time of enquiry and order.
  - 2.4.2.2.3 Rib requirements shall conform to table 3 and clause 6.
  - 2.4.2.2.4 Chemical composition as stated in clause 7, shall be as per Table 4 (cast analysis) and table 5 (product analysis). Note: ASTM E:415:2005 may be used in determining the chemical analysis
  - 2.4.2.2.5 Tensile requirements shall be as per table 6 and clause 8.1 of the standard specifications.
  - 2.4.2.2.6 Bending and Rebending as described under clause 8.2 and 8.3 and tested as per 9.3 and 9.4 shall show neither rupture nor cracks visible to a person of normal or corrected vision.
  - 2.4.2.2.7 Fatigue strength shall comply with clause 8.4 and 9.5 of the standard specification. However, previously carried out Fatigue Tests by a laboratory that meets the requirements of DM-DCLD-RD-IC-0003, maybe accepted by the DCLD-PCAS, if available.
  - 2.4.2.2.8 Marking of steel bars and bundles shall be as per clause 11 of the standard specifications and the DCL Approved Steel Bar Marking attached on every DCL certificate & scope of certification (after DCL certification had been granted).
- 2.4.2.3 Where appropriate, a comparison shall be made between the client's routine test results, results of witness testing and the results of testing by the independent testing laboratory.

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- 2.4.2.4 Where applicable, independent test shall only be conducted if the result of the in-plant test shows satisfactory results. DCLD-PCAS shall accept available valid test reports conducted by an approved DCLD-PCAS independent laboratory within one year from the date of the initial assessment, in line with the internal quality control testing plan of the factory. In such case, the testing of that particular parameter(s) shall be waived accordingly
- 2.4.2.5 If the result of the test conducted by the DCLD-PCAS approved laboratory shows non- conformance, the retest shall be carried out on the reference sample kept by the client or on new samples collected by the authorized auditor on which full testing shall be carried out, if necessary.
- 2.4.2.6 If the retest passed, the initial product assessment is considered conforming to product specification. If not, the client will be advised to take corrective action.
- 2.4.2.7 Only after re-assessment and subsequent product compliance shall the client be allowed to use the DCL Conformity Mark on his product.

#### 3. GRANTING OF THE DCL CERTIFICATION

- 3.1 CONDITIONS FOR GRANTING THE DCL PRODUCT CONFORMITY CERTIFICATE
- 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 Certificate of Conformity and the authorization to use the DCL Conformity Mark shall be issued to the client for the type(s) and size of the product covered by the assessment.
- 3.1.2 The client shall agree with the DCLD-PCAS 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 Internal product quality assurance plan

The client shall have an internal product quality assurance plan giving details of the tests to be carried out at the factory. This will include as a minimum, the following details: (1) location of sampling; (2) frequency of sampling; (3) quantities of samples; (4) tests to be carried out; (5) results acceptance criteria; and (6) responsible person to carry out the activity.

The plan shall take into consideration the production process, the volume of production, the criticality of the test to be specified, and other relevant factors. Frequency of sampling and testing shall be in accordance with annex E of the standard specification.

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# 3.1.4 Independent Testing Plan

The client 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 Certified Clients under the Factory Assessment Scheme, and implemented by DCLD-PCAS. The cost of testing under the independent testing plan shall be borne by the client.

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# 3.2 ISSUANCE OF DCL PRODUCT CONFORMITY CERTIFICATE

If the conditions mentioned in clause 3.1 above have been complied, the client shall be issued a DCL Certificate of Conformity and a Scope of Certification that covers the sizes and grades of the products that are certified and will be authorized to use the DCL Conformity Mark on the certified products.

#### 3.3 RESPONSIBILITIES OF THE CLIENT

- 3.3.1 The client shall ensure that his product, for which a Certificate of Conformity has been issued, conforms at all times to the requirements of the General Rules and Specific Rules and shall maintain to the satisfaction of DCLD-PCAS, a system of quality control including inspection and testing.
- 3.3.2 The client shall give the duly authorized auditor(s), 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 DCLD-PCAS in writing of any change of management, transfer of plant site, modification in the product, manufacturing process or factory's quality management system.
- 3.3.4 In case of transfer of factory location, the Certificate of Conformity 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 of the certification scheme and the use of DCL Conformity Mark shall constitute sufficient grounds for suspension, withdrawal and termination of certification in accordance with DM-DCLD-IMS-RD-07
- 3.3.6 Any dispute that may arise in connection with the Terms and Conditions of the certification scheme 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

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- 3.4.1 The design and use of the DCL Conformity Mark shall be in accordance with the Markings and Tag Requirements for the Control of Reinforcing Steel Bars in the Emirate of Dubai, DM-DCLD-RD-DP21-2091 (IC), and the terms and conditions for the use of the DCL Mark of Conformity, DM-DCLD-IMS RD-13.
- 3.4.2 The client shall submit a product-marking proposal for approval by the DCLD-PCAS. The proposal shall include drawings and/or diagrams showing the location and size of the marking for each size of the product/product package.
- 3.4.3 The Certificate of Conformity and the authorization to use the DCLD Conformity Mark is non-transferable.

#### 4. SURVEILLANCE

- 4.1 DCLD-PCAS or their authorized auditor 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 Certified Clients under the Factory Assessment Scheme.
- 4.2 Testing as part of surveillance shall be in accordance with the Independent Testing Plan (clause 3.1.4) that has been agreed between DCLD-PCAS and the client.

## 5. FEE SCHEDULE

- 5.1 The client shall pay the applicable fees and charges related to the granting of the Certificate of Conformity and the authorization to use the DCL Conformity Mark based on DCL Official Fee Structure for the control of reinforcing steel bars in the Emirate of Dubai, DM-DCLD-RD-DP21-2092 (IC).
- 5.2 The fees for this certification scheme shall include but not limited to the following;
  - 5.2.1 Application Fee
  - 5.2.2 Initial Assessment Fee
  - 5.2.3 Certification Fee
  - 5.2.4 Marking Fee
  - 5.2.5 Surveillance Fee
  - 5.2.6 Annual Renewal Fee
  - 5.2.7 Testing Fee
  - 5.2.8 Outsource Activity Fee, where applicable

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