
 GOVERNMENT OF DUBAI	Organization/Unit:	إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 إمارة دبي Dubai Municipality
	Document Title:	Certification of steel wire for reinforcement of concrete products as per BS 4482: 2005, Amd. 1:2007	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP21-2175 (IC)	رقم الوثيقة :	



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بيانات مفتوحة / OPEN DATA

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Issue Date	Rev. No.	Summary Of Amendments
04-11-2010	0	First draft
09-12-2010	0	Final draft
13-12-2010	1	Issue for use
06-03-2019	2	Updated in accordance with new DM template and new DM logo
27-08-2020	3	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. Add provision for accepting valid test reports
03-08-2021	4	Updated in accordance with the new version of the standard specification.
26/09/2021	5	Removal of the documents in clause 2.1.2, in addition to further amendment in the provision for accepting valid test reports (clause 2.4.1.4), 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.
07/10/2022	6	Changing section name as per the new organizational structure, and replace HOU by CQPSM (Section's Manager), also addition of surveillance in the clause 2.4.1.4
27/03/2023	7	Full re-structuring and transfer of common provisions to the general rule. Clauses are re-numbered and document title has been revised accordingly. Use of New DM Logo

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## 1. INTRODUCTION

- 1.1 This document prescribes the specific rule for certification of the product(s) as identified herein, in accordance with the requirements of DM Third Party Product Certification Scheme Through Factory Assessment, taking into consideration the applicable normative references and standard specification, in addition to the requirements for conformity evaluation, as stated below.
- 1.2 The applicant/client shall comply with this specific rule, and to all provisions under the “**General Rule for DM Third Party Product Certification Scheme Through Factory Assessment**”**DM-DCLD-RD-DP21-2001 (IC)**.
- 1.3 This specific rule **is an integral part of the general rule** and both shall always be read together.

## 2. SCOPE



- 2.1 This specific rule covers requirements for plain, indented and ribbed steel wire used for the reinforcement of concrete products.
- 2.2 It contains provisions for two grades, based on mechanical properties. Grade 500 is specified for plain, indented and ribbed wires. Grade 250 is specified as an option for plain wires only.
- 2.3 The nominal wire diameter (size) range specified is 2.5mm to 12mm.
- 2.4 This specific rule does not -by itself- permit the use of the below product in the construction sites. However, it does provide the necessary general conformity assessment criteria, which are required for the evaluation and issuance of the certification and the authorization of the use of the DCLD Conformity Mark. Other relevant requirements issued by the regulatory bodies if any; shall always be fulfilled.

## 3 PRODUCT IDENTIFICATION AND APPLICABLE STANDARD/NORMATIVE REFERENCE

- 3.1 Product name: Steel wire for the reinforcement of concrete products.
- 3.2 Applicable standard/Normative reference: BS 4482:2005, Amd 1:2007 – Specification - Steel wire for the reinforcement of concrete products
- 3.3 Additional reference:
- ISO 9001 Quality Management System – Requirements
- ISO 19011 Guidelines for Auditing Management Systems

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#### 4 DEFINITION OF TERMS

4.1 In addition to the definitions given in BS 4482 and the General Rule of the scheme [DM-DCLD-RD-DP21-2001 (IC)], the following shall apply:-

4.1.1 Standard Specification – BS 4482:2005, Amd 1:2007 – Specification - Steel wire for the reinforcement of concrete products.

#### 5 REQUIREMENTS FOR INITIAL CERTIFICATION

5.1 The process of application, initial assessment and product sampling shall be in line with the related provisions in the general rule and the standard specifications (Section 23 of the standard specifications).

5.2 The manufacturer of steel wire for the reinforcement of concrete shall submit to DCLD a unique bar marking requirements as per BS 4482:1985 with Amd 1:1997, Amd 2:2001, of their products for approval. The DCLD approved mark shall be applied to the products covered by the certification.

5.3 The factory shall have a laboratory with the following testing equipment as a minimum:

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

5.4 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. Frequency of sampling and testing shall be in accordance with table 5 of the standard specification.

5.5 Product Evaluation and testing

5.5.1 The product shall conform to the requirements as specified in clauses 5, 6, 7, 8, 9, 10, and 11 of the standard specification.



5.5.2 Tests to be carried out in accordance with BS 4482:2005 with Amd 1:2007 requirements and shall have values as follows;

5.5.2.1 Chemical composition shall be as per clause 7.1 and Table 2

Note: ASTM E:415:2005 maybe used in determining the chemical analysis

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5.5.2.2 Mechanical properties (Yield, TS/YS ratio-Rm/Re, Elongation) shall be as per clause 7.2 and Table 3

5.5.2.3 Bend performance shall be as per clause 7.2.4

5.5.2.4 Dimensions, mass per meter and tolerances shall be as per clause 7.3 and Table 4

5.5.2.5 Bond strength and surface geometry shall be as per clause 7.4 and Tables 5, 6, 7 & 8

5.5.3 The results of testing must meet the requirements as per the standard specification.

## 6 GRANTING OF THE DCLD CERTIFICATION

6.1 The DCLD product conformity certificate and the authorization to use the DCLD conformity mark shall be granted upon conformance with all related provisions in the general rule.

6.2 Fees shall be as per DM-DCLD-RD-DP21-2097 (IC) and other relevant provisions in the general rule.

6.3 DCLD-CQPS shall carry out surveillance of certified clients based on the approved periodic plans and related provisions in the general rule.

6.4 Appeals, disputes and complaints shall be in line with the relevant provisions in the General Rule.

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