

 GOVERNMENT OF DUBAI	Organization/Unit:	إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 بلدية دبي Dubai Municipality
	Document Title:	Certification of High Tensile Steel Wire Strand for Pre-stressing of concrete as per BS 5896: 1980 Amd 1	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP21-2132 (IC)	رقم الوثيقة :	

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Issue Date	Rev. No.	Summary Of Amendments
20-08-2006	0	First draft for comments
31-01-2007	1	Issue for use.
19-11-2007	2	<ul style="list-style-type: none"> - Amendment of Document title. - Amendment of Section 7.1.3 to modify the clause no. to 23.3 - Amendment of Section 7.2.3 to include Constriction at Break and to remove the Reverse Bend. - Amendment of Section 8.1.2.1 to add the Relaxation Properties. - Amendment of Section 8.1.2.2 for more detailed and specific properties according to Table 6 of the standard specification, and to remove Dimensions, Reverse Bend, Tensile Property. - Amendment of Section 8.1.2.2, to remove Relaxation Properties. - Amendment of Section 9.1 to modify the validity of the license to one year
12-07-2009	3	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).
30-01-2011	4	Updated in accordance with AMD 1 of the standard Spec's.
06-03-2019	5	Updated as per new DM template and new DM logo
20-09-2020	6	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. Changing font type and size and restructuring some clauses.
26-09-2021	7	Removal of the documents in clause 2.1.2, in addition to further amendment in the provision for accepting valid test reports (clause 2.4.2.5), 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.
04-10-2022	8	Changing section name as per the new organizational structure, and replace HOU by CQPSM (Section's Manager), PCAS by CQPS (Certification and Quality Control of Products Section).
27-03-2023	9	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 specifies requirements for high tensile steel wire strand that has been given a stress relieving heat treatment to produce either of two classes of relaxation. The strand may be:
- seven-wire standard strand
 - seven-wire super strand
 - seven-wire drawn strand
- 2.2 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: High Tensile Steel Strand for the Prestressing of Concrete.
- 3.2 Applicable standard/Normative reference: BS 5896:1980 AMD No. 1 Specification for high tensile steel wire and strand for the prestressing of concrete
- 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 5896:1980 AMD No. 1 and the General Rule of the scheme [DM-DCLD-RD-DP21-2001 (IC)], the following shall apply:-

4.1.1 Standard Specification – BS 5896:1980 AMD No. 1 Specification for high tensile steel wire and strand for the prestressing of concrete

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

- Weighing Scale.
- Calipers and other linear measuring test equipment.
- Tensile Test Equipment
- Relaxation Test Equipment.

5.3 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. It should be in accordance with clause 23 of the standard specification and include the following :-

- Geometrical Properties
- Wire Condition
- Breaking Load or Tensile Strength
- Proof Load or Proof Stress
- Elongation at Maximum Load
- Load-Extension Diagram
- Ductility (constriction)
- Relaxation Properties

5.4 Product Evaluation and testing

5.4.1 The tests to be carried out shall be in accordance with the Test Method mentioned in section 24.2:-

5.4.1.1 Dimension (Diameter) – shall be measured in accordance to section 24.2 of the standard specification and shall be within the limits given in Table 6.

5.4.1.2 Tensile Properties – the tensile property of the strand shall be measured in accordance with the test methods stated in the standard specifications.

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5.4.1.3 Constriction at break.

5.4.1.4 Relaxation – shall be carried out as per section A.4 of the standard specifications.

5.4.1.5 Breaking Load and Elongation at Maximum Load –shall be carried out as per section A.5 of the standard specifications.

5.4.2 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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