

	AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED Lifting Inspection	Doc No: QC-LIF-P-005
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Title: Inspection Procedure of Textile (Fibre) Rope Slings		Rev: 2
Established By: Ashraf Elsaid	Position: Lifting Supervisor	Date: JULY-2022
Approved By: Ahmed Mohamed	Position: Operation Manager	

Inspection Procedure of Textile (Fibre) Rope Slings

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1. YOUR SAFETY IS FIRST:

Your safety wear is mandatory at job sites including in general: suit, shoes, helmet, gloves, ear plugs, glasses, and mask.

2. SCOPE:

This procedure covers the inspection and testing of textile (fibre) rope slings.

3. REFERENCE STANDARDS:

BS EN 1492- 4: 2004 + A1: 2008	<i>Textile Slings – Safety – Lifting Slings for General Service Made from Natural and Man-Made Fibre Ropes</i>
LEEA COPSULE Edition 9 - 2019	<i>Code of Practice for the Safe Use of Lifting Equipment</i>

4. FIBRE ROPE SLINGS:

flexible sling comprising one or more parts of identical fibre rope, terminating in spliced eyes with or without thimbles and fittings, or in the case of an endless sling, joined to itself with a splice

5. INSPECTION AND TESTING OF FIBRE ROPE SLINGS:

5.1- INSPECTION AND TESTING OF NEW FIBRE ROPE SLINGS:

- All Fibre rope sling shall be proof load tested by the sling manufacturer with written records kept of such testing.
- Client shall provide the manufacturer's test certificate at the time of inspection.
- If the record test by the manufacturer is not available with the user, all Fibre rope slings shall be proof load tested as per (7. PROOF LOAD TEST).

5.2- INSPECTION AND TESTING OF IN-SERVICE FIBRE ROPE SLINGS:

- In-service fibre rope slings shall be inspected as per (6. INSPECTION OF FIBRE ROPE SLINGS IN-SERVICE).
- If the record test by the manufacturer is not available with the user or the fibre rope sling is repaired as per manufacturer's recommendations, fibre rope sling shall be proof load tested as per (6. PROOF LOAD TEST).

6. INSPECTION OF FIBRE ROPE SLINGS IN-SERVICE:

Examination periods should be determined by a competent person, taking into account the application, environment, frequency of use and similar matters, but in any event, slings should be examined at intervals not exceeding **six months** by a competent person to establish their fitness for continued use.

Before each use, the sling should be inspected for defects and to ensure that the identification and specification is correct.

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A sling that is unidentified or defective should never be used, but should be referred to a competent person for examination.

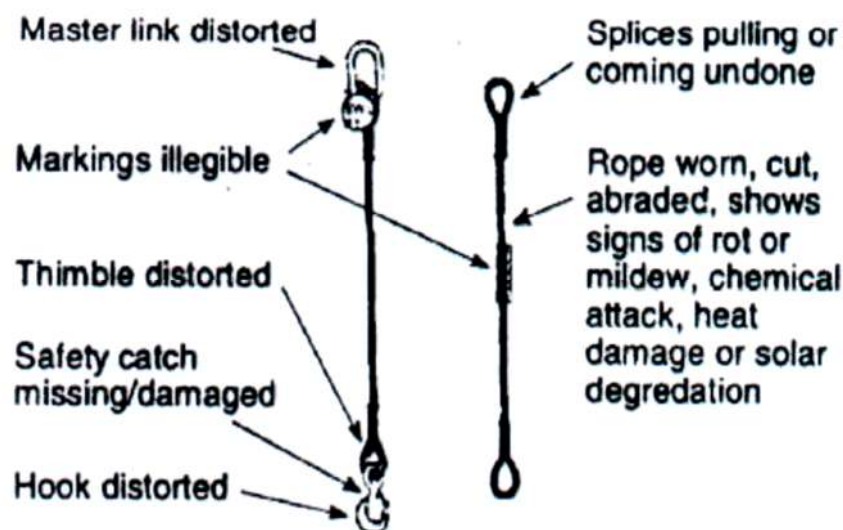
During the period of use, frequent checks should be made for defects or damage, including damage concealed by soiling, which might affect the continued safe use of the sling. These checks should extend to any fittings and lifting accessories used in association with the sling.

If any doubt exists as to the fitness for use, or if any of the required markings have been lost or become illegible, the sling should be removed from service for examination by a competent person.

The following are examples of defects or damage likely to affect the fitness of slings for continued safe use:

- General external wear due to abrasion. Abrasion causes a breakdown of the filaments and fibres
- Surface chafe, cuts and mechanical damage
- Internal wear, indicated by excessive looseness of the strands or by the presence of fibre dust within the rope.
- Chemical attack indicated by flaking of the surface fibers, which may be plucked or rubbed off (as a powder in extreme cases).
- Heat or friction damage. Heat damage of natural fibre ropes is indicated by charring of the fibres, whilst man-made fibres take on a glazed appearance, and in extreme cases, fusion of the fibres occurs
- Damaged, cracked or deformed fittings.

The following figure shows examples of points to be inspected.



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7. PROOF LOAD TEST:

- The manufacturer shall retain a record of the results of all tests and examinations for inspection and reference purposes.
- If the record of test by the manufacturer is not available, only then the rope slings shall be proof load tested prior to initial use and the user shall maintain the record.
- The proof load of fibre rope slings shall be $(2 \times WLL)$.
- The proof load for multiple leg slings shall be applied to individual legs and shall be $(2 \times WLL)$ of single leg round sling.

8. MARKING:

The marking of the sling shall include the following:

- a) working load limit in straight lift in the case of single leg or endless slings, or for multi-leg slings having an angle β of 0° to 45° ;
- b) material of the rope, e.g. manila, polyester etc;
- c) reference number of the rope and grade of fittings;
- d) nominal length in m;
- e) manufacturer's name, symbol, trade mark or other unambiguous identification and, where applicable, his authorized representative";
- f) traceability code
- g) number and part of this European Standard.
- h) mandatory marking

The above-mentioned information shall be marked on a label attached to the sling as follows:

- a) on single legs with soft eyes, in one eye adjoining the splice or on the standing part of rope at the end of the splice;
- b) on single legs with thimbles, on the standing part of rope at the end of the splice;
- c) on multi-leg slings, on a durable label (e.g. a round tag) attached to the master link or on one leg of the sling as in a);
- d) on endless slings, at the end of the splice

The material from which the sling is made shall be identified by the color of the label itself on which the information is marked. The following colors shall be used:

- Polyamide green
- Polyester blue
- Polypropylene brown
- Manila/sisal/hemp white.

If the item is not already marked, it shall be clearly marked with an identification number and if the test is satisfactory, the WLL and date of the test.

9. REPORTING AND CERTIFICATION:

A certificate of test and thorough examination will be issued upon the satisfactory completion of the examination, i.e. the lifting equipment is safe to operate

A defect report will be issued if the lifting equipment fails to meet the requirements.

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10. Inspector Competency and Qualification:

Inspector shall have minimum qualification of LEEA Foundation – LEEA Lifting Equipment General