

	AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED Lifting Inspection	Doc No: QC-LIF-P-017
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Title: Inspection Procedure of Synthetic Flat Webbing Slings		Rev: 2
Established By: Ashraf Elsaid	Position: Lifting Supervisor	Date: JULY-2022
Approved By: Ahmed Mohamed	Position: Operation Manager	

Inspection Procedure of Synthetic Flat Webbing 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:

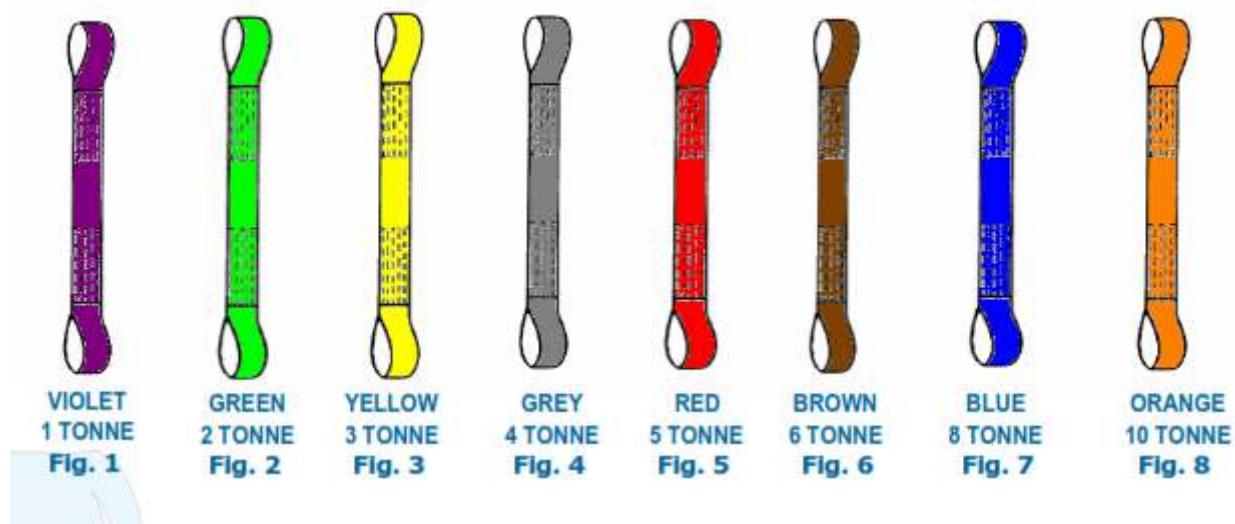
This procedure covers the inspection and testing of man-made (synthetic) flat webbing slings.

3. PRODUCT/ MANUFACTURE STANDARDS:

BS EN 1492-1: 2000 + A1: 2008	<i>Textile Slings – Safety – Part 1: Flat woven webbing slings, made of man-made fibres, for general purpose use</i>
AS 1353.1-1997 AMDT 1	Flat synthetic-webbing slings - Product specification
B30.9 - 2018	Slings

4. FLAT WEBBING SLINGS:

Flexible slings, usually made from woven polyester, nylon (polyamide), or polypropylene. Flat webbing slings consists of a sewn webbing component, with or without fittings. Flat webbing slings can be Simplex or Duplex: a duplex webbing sling is made with two synthetic fabric layers stitched together for extra reinforcement. A simplex webbing sling is made with only one synthetic fabric layer. Flat webbing slings are used for attaching loads to the hook of a crane or other lifting machine.



5. INSPECTION AND TESTING OF FLAT WEBBING SLINGS:

5.1- INSPECTION AND TESTING OF NEW WEBBING SLINGS:

- All flat webbing slings 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.

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- If the record of test by the manufacturer is not available with the user, flat webbing slings shall be proof load tested as per (7. PROOF LOAD TEST).

5.2- INSPECTION AND TESTING OF IN-SERVICE FLAT WEBBING SLINGS:

- In-service flat webbing slings shall be visually inspected as per (6. INSPECTION OF IN-SERVICE FLAT WEBBING SLINGS).
- If the record of test by the manufacturer / inspection body is not available with the user or flat webbing sling is repaired as per the manufacturer's recommendations, flat webbing slings shall be proof load tested as per (7. PROOF LOAD TEST).

6. INSPECTION OF IN-SERVICE FLAT WEBBING SLINGS:

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 visually examined at intervals not exceeding **six months** by a competent person to establish their fitness for continued use.

Before first use of the sling, it should be ensured that:

- a) the sling corresponds precisely to that specified on the order;
- b) the manufacturer's certificate is to hand;
- c) the identification and WLL marked on the sling correspond with the information on the certificate.

Before each use, the sling should be inspected for defects and to ensure that the identification and specification are correct. 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, 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 **thorough examination** by a competent person.

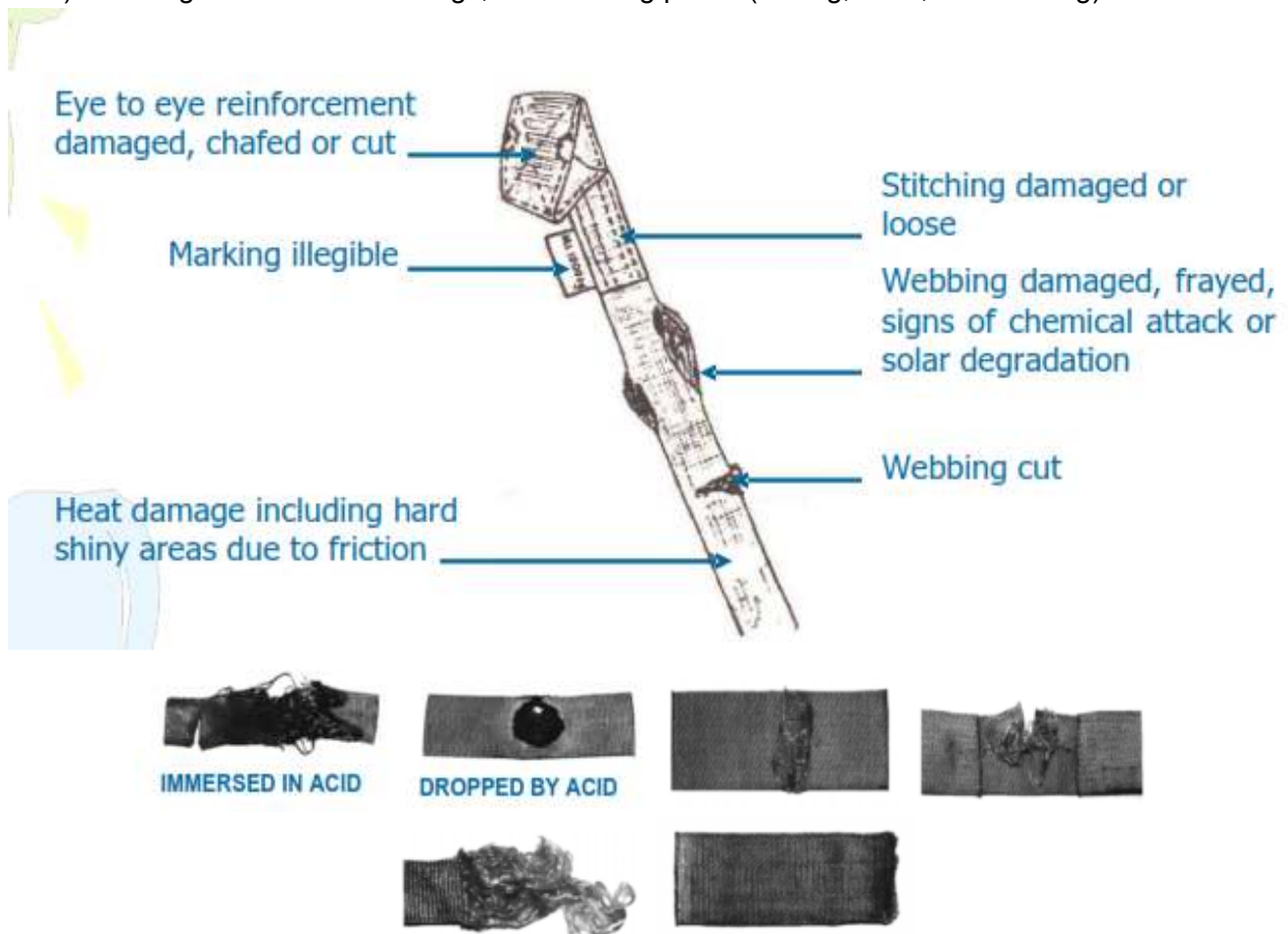
During examination of flat webbing slings, the following shall be checked:

- Marking (as per 8. MARKING)
- Measurement of principal dimensions, length shall be checked for marking for any signs of elongation / stretching
- Condition of sling material
- Checking sling on its entire length
- Stitching integrity (checking for seam damage, burst stitching)
- Load bearing points conditions

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

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- Surface chafe of surface fibres: any substantial chafe, particularly localized, should be viewed critically.
- Local abrasion, as distinct from general wear.
- Cuts. Cross or longitudinal cuts, cuts or chafe damage to selvages, cuts to stitching or eyes.
- Chemical attack: indicated by flaking of the surface which may be plucked or rubbed off, signs of surface powdering and possible loss of coloring
- Heat, burn, UV degradation, or friction damage: indicated by the fibres taking on a glazed appearance and in extreme cases, fusion of the fibres can occur.
- Damaged or deformed fittings, load bearing points (cutting, wear, and scuffing)



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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 flat webbing slings shall be proof load tested prior to initial use and the user shall maintain the record.
- The proof load of flat webbing 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 sling.
- The slings shall sustain the load without any deformation
- The slings are post-test thoroughly examined as per (6- INSPECTION OF IN-SERVICE FLAT WEBBING SLINGS)

8. MARKING:

Flat webbing slings shall be clearly and legibly marked on a durable label fixed directly to the sling. The color of the label corresponds to the material of which the flat webbing sling is made of:

- Green label: Polyamide
- Blue label: Polyester
- Brown label: Polypropylene

The marking of flat webbing slings shall include the following:

- a) Name of manufacturer
- b) WLL for vertical lift (corresponds to the number of stitching lines)
- c) In addition to vertical choke and basket hitch, the WLL of each configuration may be marked on the reverse side of the exposed part of the label
- d) The material of synthetic webbing sling
- e) The grade of fittings – if any
- f) The nominal length, in meters
- g) Traceability code
- h) The number and part of the related standard, i.e. BS EN 1492-1

For **multi-leg sling assemblies** (i.e. 2 leg, 3 leg or 4 leg sling assemblies), the marking shall be clear and legible on a form of durable label (e.g. a round tag), this label shall be attached to the master link. Marking of the sling shall include the maximum angle of use of any leg to the vertical; the label on each leg shall not show the WLL.

If the item is not already marked, it shall be clearly marked (labelled) 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