TT CLUB
transport insurance plus

ICHCA
International Ltd

Risk Management
Safe slinging

IIL/5 & IIL/6

TT CLUB
IS MANAGED
BY **THOMAS**
MILLER

THE PRINCIPLES OF SLINGING

The basic principle must be to ensure that the load is as secure in the air as it was on the ground

The slinging method should be suitable for the load to be lifted having adequate means of attachment to both the load and the lifting appliance

The weight of the load must not exceed the safe working load (SWL) of the slinging gear and lifting appliance

The load must not damage or be damaged by the slinging gear

SAFE SLINGING

Know or find out the weight of the load

Select the correct sling

Fit the sling correctly to the load paying particular attention to the centre of gravity of the load and the hitch of the sling

Make a trial lift, keeping area clear

Set load down in position using bearers

Release the sling carefully – beware of snagging the load

Return gear to its designated storage location (Gear room/store etc.)

TT CLUB

TT Club Mutual Insurance Ltd
90 Fenchurch Street London EC3M 4ST
Tel: +44 (0)20 7204 2626
Email: riskmanagement@ttclub.com
www.ttclub.com

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SAFE WORKING LOADS

WEBBING SLINGS

Width mm	SWL	Width mm	SWL
25	1t	125	5t
50	2t	150	6t
75	3t	200	8t
100	4t	250	10t

WEBBING SLINGS ILO CONVENTION 152

GRADE 8 (T) CHAIN SLINGS

Dia.	SWL	Dia.	SWL
7	1.5t	19	11.5t
10	3.2t	22	15.5t
13	5.4t	26	21.6t
16	8t	32	32t

CHAIN: ISO 7593-1986

WIRE ROPE SLINGS

Dia.	SWL	Dia.	SWL
12	1.3t	24	5.4t
16	2.4t	26	6.3t
18	3t	32	9.6t
20	3.7t	36	12.1t

WIRE ROPE SLINGS: ISO 7531-1987

MODE FACTORS

THESE MODE FACTORS (M) SHOULD BE APPLIED TO THE STRAIGHT PULL SWL MARKED ON THE SLING

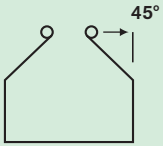
STRAIGHT PULL

M = 1.0

CHOKE HITCH

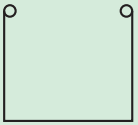
M = 0.8

BASKET HITCH



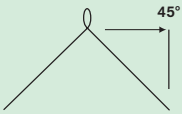
M = 1.4

PARALLEL BASKET HITCH



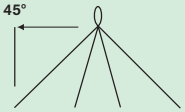
M = 2.0

2 EQUAL SINGLE LEGS USED 0°–45°



M = 1.4

3 OR 4 EQUAL SINGLE LEGS USED 0°–45°



M = 2.1

ICHCA International Limited
Suite 2, 85 Western Road,
Romford, Essex RM1 3LS
United Kingdom

Tel: +44 (0)1708 735 295 Fax: +44 (0)1708 735 225
email: info@ichca.com
www.ichca.com

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IIL/6

SLING INSPECTION

REPORT IF DEFECTS ARE FOUND

IF IN ANY DOUBT DO NOT USE

WIRE ROPE SLINGS

1. 5% of total outer wires broken in any length of six rope diameters
2. Closely grouped broken wires
3. Reduction of diameter to less than 90%
4. Heat damage. Temp >100°c
5. Defective fittings, ferrules or splices (broken wires near splices or terminations)
6. Illegible markings

CHAIN SLINGS

1. Pins or clips missing from joining systems
2. Distorted or bent fittings or links
3. Stretched chain +10% length
4. Wear in links or eyes –8% diameter
5. Cuts, nicks, gouges or cracks
6. Discolouration due to heat or corrosives
7. Illegible markings

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REPORT IF DEFECTS ARE FOUND

IF IN ANY DOUBT DO NOT USE

FLAT WOVEN WEBBING SLINGS

1. Selvage cuts or severe abrasion
2. Damaged stitching
3. Heat damage (friction burns)
4. Chemical damage
5. Solar degradation (Uv)

FIBRE ROPE SLINGS

1. Splices pulling
2. Cuts or severe abrasion
3. Heat damage and burns
4. Chemical attack
5. Solar degradation (Uv)
6. Illegible markings

ROUND SLINGS *used for engineering activities only*

SHOULD NOT BE USED FOR CARGO HANDLING

1. Cuts in outer sleeve
2. Exposed inner core
3. Severe abrasion to outer sleeve
4. Heat damage (friction burns)
5. Chemical damage
6. Damage to Stitching
7. Solar Degradation (Uv)

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Safe slinging

IIL/5 & IIL/6

Although many cargoes are today transported in cargo transport units and, therefore, not individually handled during the transportation process, there are still individual loads that have to be slung and lifted to/from ships and at other stages in the marine chain. This involves the provision and use of loose gear and, accordingly, the skill of caring for and applying such gear is still required.

These pocket cards are aimed specifically at these issues and in particular the provision, use and care of slings. The principles of slinging have not changed over the years and they are shown on IIL/5 together with basic considerations and actions to enable the work to be carried out safely.

There is a number of differing sling materials in use today – chain, wire rope, fibre rope, flat woven webbing and round – and the safe working loads (SWL) of the various materials as well as the main sizes in use are shown on IIL/5 together with the ways in which slings can be safely applied to a load and, by applying mode factors, the effect each use has on the ultimate SWL of the sling(s). Care and maintenance of slings is also of considerable importance and IIL/6 details what sling users should be on the look out for whilst they use slings in their daily work. Any defects found should be reported to an appropriate person in the organisation.

TT CLUB

The **TT Club** is the international transport and logistics industry's leading provider of insurance and related risk management services.

Established in 1968, as a mutual association, we specialise in the insurance of liabilities, property and equipment for intermodal operators. Customers are drawn from a wide range of the world's shipping lines, port authorities, cargo and passenger handling terminals, freight forwarders, and logistics companies. Having developed in step with the multi-modal industry, TT is recognised as an independent industry forum, liaising closely with national and international trade associations, including FIATA, IAPH, WSC, ESPO, EIA, ILO, ICHCA and the IMO.

As a mutual insurer, the Club exists to provide its policyholders with benefits that include specialist underwriting expertise, a world-wide office network providing claims management services, and first class risk management and loss prevention advice. This is one of a number of publications that seek to disseminate good practice through the supply chain.

For more information on TT Club and its services please visit: www.ttclub.com

ICHCA International Ltd

ICHCA International is dedicated to the promotion of safety and efficiency in the handling and movement of goods by all modes and throughout the supply chain. Originally established in 1952 and incorporated in 2002, it operates through a series of National Sections, Regional Chapters, Panels, Working Groups and Correspondence Groups and represents the cargo handling world at various international organizations, including the International Maritime Organization (IMO), United Nations Conference on Trade and Development (UNCTAD), International Labour Organization (ILO) and the International Standards Organization (ISO).

Its members include port terminals, transport, companies and other groups associated with cargo handling and coordination.

Members benefit from consulting services and informative publications dealing with technical matters, "good practice" advice, and cargo handling news.

For more information on ICHCA International and its services please visit: www.ichca.com