



Marine Notice 2/2011

Synthetic Fibre Slings

AMSA has noted three incidents involving the incorrect use of synthetic fibre slings. These synthetic fibre slings, round slings or soft slings are commonly used in the maritime industry for cargo handling operations in association with cranes.

Synthetic fibre slings have advantages over chain or wire rope slings in that they are lighter and easier to handle. However, they have certain disadvantages in that they are more susceptible to damage and can be cut if rigged over sharp edges or corners without protection or abraded when drawn over a rough load.

Misuse of synthetic fibre slings can result in failure and the contributing factors for such failures include:

- inappropriate selection of slings in relation to the load;
- undersized slings;
- existing damage not detected prior to use;
- incorrect slinging techniques, including excessive angles between legs of sling;
- excessive choke; and
- use of synthetic slings without protective sleeve.

Precautionary action is required when using synthetic slings to reduce the risk of failure. These actions include:

- an assessment of the load to be lifted to ensure the appropriate type of sling is used in each case. This may result in a number of different types of sling being required where varied loads are to be handled;
- where the load to be handled has sharp edges or components (e.g. cleats) or a rough surface, then soft slings must not be used unless they are protected from cutting or abrasion;

- prior to use each sling must be inspected for signs of damage that could affect its safe use and certification in relation to the sling must be in date and it is recommended that records are to be kept for each sling;
- care must be taken in cleaning, maintaining, storing and inspection of slings that are exposed to harsh environments;
- the working load limit (WLL) with respect to lifting configuration (hitches) must not be exceeded at any time. The WLL of a sling depends on the included angle between the legs of the sling, or in the case of a choked hitch or basket hitch, the angle at the hitch;
- the sling must only be employed as per the manufacturer's label or instructions;
- ensuring that synthetic slings are used with a protective sleeve where necessary or recommended by manufacturer's instructions; and
- avoiding using a sling with an included angle in excess of 120°.

For information regarding the use and other considerations, please refer to the Australian Standard (AS) 4497.2 *Round slings – synthetic fibre – Part 2 Care and use*.

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