

PRODUCT INFORMATION

USER INFORMATION

Chain lifting slings in service

Usage guidelines

Chain lifting slings in service

Chain lifting slings may only be used for lifting, transporting and lowering loads. They are a component of the hoisting gear representing the connection between the lifting gear hook and the load to be lifted.

Before using under specific ambient influences (chemicals, weather conditions, etc.) it is recommended to seek advice from the supplier or a competent person.

Working load limit

A chain sling must never be required to lift a load exceeding its indicated permissible working load limit, taking also into consideration the tilt angle. Indicated working load limits are valid without limitation for temperatures from -40° to 200°C. The working load limit drops by 10% in the temperature range between 200° and 300°C and by 25% from 300° to 400°C. Service outside this temperature range is not permissible.

The working load limit is a function of nominal chain diameter, number of legs, tilt angle and type of fitting, assuming symmetry of load. Asymmetrical strain and centre of gravity shifts, i.e. working load limit reduction, can be compensated either by shortening the chain or by increasing nominal chain diameter. Where necessary, the appropriate standards or regulations or a competent person should be consulted.

Marking

Marking must contain manufacturer's identification mark, measurements, material, working load limit (in consideration of tilt angle for multileg lifting procedures), date of manufacture and tracing code, to the extent that local regulations do not require further details.

Storage and maintenance

Before and during storage of chains

- Dry, clean and lightly grease
- Dry environment, normal temperatures (protect from heat and chemical influences)
- Storage on stands (protection from dirt)

Inspection

Before first and every subsequent use chain lifting slings should be carefully inspected for visible signs of damage and imperfections affecting safe usage. User information/instructions must be read and observed. Chain lifting slings in service must be regularly checked and examined by a competent person, at least once every year, more often if used under harsher service conditions. Every three years at most chain lifting slings must be subjected to a crack detection test or proof loading with subsequent visual check. The crack detection test must be conducted by a competent person.

Precautions

- Chain shortening is only permissible using shortening claws or clutches. Chains must not be knotted.
- A sling chain with damaged components must not be used.
- Hoist hooks must not bear the load stress on the sides, at the rear or on the hook tip, but only in the hook hollow. Master links must move freely in the hook. Avoid hook contact with sharp edges.

- Grade 8 chains and sling gear must avoid contact with acids or other aggressive chemicals. In case of doubt consult supplier. Direct service in galvanizing plants is forbidden.
- Persons assembling high strength grade 8 and special class 10 chain lifting slings must be authorised to do so and have the appropriate knowledge. The special assembly and marking instructions must be observed.
- Chains and components of different grades must not be assembled together.
- False assembly or handling of chain lifting slings can lead to material and human damage with lethal consequences.

Removal from service

Discard in the event of:

- Mechanical damage such as dented links, cracks or notches in links
- Deformed master links, bent hooks or other damaged components
- If stretched more than 5 %
- More than 10 % reduction of nominal chain diameter
- Damage to safety latches
- Fittings and components:
Usage prohibited if mechanical damage, i.e. compressed areas, notches or cracks, bends, twists, damage to safety mechanisms, as well as 5% and more cross sectional reduction in eyes, bolts and bows on shackles and hooks

It is forbidden to repair high strength grade 8 components by welding. For repair of chain lifting slings and components only original replacement parts of corresponding measurements may be used.

General

These usage guidelines are based on existing European recommendations and standards. Further to these, consideration should also be taken of applicable local, national and international legislation, standards, directives and regulations from official societies (professional organisations, classification bodies, etc.) with regard to equipment safety (personal protection, industrial safety, accident prevention), as well as recommendations and operating instructions from manufacturers and/or operators of the equipment being used (lifting gear, conveyor systems, etc.).

In case of doubt about the technical properties of chains and components, their suitability for the envisaged tasks or safety requirements, consult manufacturer or supplier.