

OPERATIONAL EXCELLENCE

INSTRUCTIONS FOR THE SAFE USE OF: SHACKLES

This document is issued in accordance with the requirements of DNV 2.7-1 and EN 12079 or ISO 10855 and EN 13889. It outlines the care and safe use of **Shackles** & is based on the Oil & Gas UK "Best Practice for the Safe Packing & Handling of Cargo to & from Offshore Locations". It should be read in conjunction with the instructions for the safe use of Wire Rope Slings.

This information is of a general nature only covering the main points for the safe use of Shackles. It may be necessary to supplement this information for specific operations.

ALWAYS

- Always store & handle shackles correctly.
- Always inspect shackles before use & before placing into storage.
- Always select the correct pattern of shackle & pin for the required application.
- Always allow for the full resultant imposed load.
- Always fully tighten the pin.
- Always ensure the load acts through the centre line of the shackle using spacers if necessary to meet this requirement.

SELECTING THE CORRECT SHACKLE

Shackles are available in a range of material grades, sizes & designs. Select the shackle to be used & plan the lift taking the following into account:

Type of shackle to be used - dee or bow, British Standard or other design.

Type of pin - screwed with collar & eye are suitable for general purposes; with countersunk head for where clearance is limited; bolt & nut for where the pin may be out of sight or subject to movement.

Full resultant imposed load - when using shackles with multi-leg slings remember that as the included angle increases so does the load in the leg and any attachment to the leg. When used to suspend pulley blocks account must be taken of the imposed load due to operating effort.

STORING AND HANDLING SHACKLES

Never return damaged shackles to the storage area. Returned shackles should be dry, clean and protected from corrosion.

Do not alter, modify or repair shackles and never replace missing pins with unidentified pins, bolts, etc. Refer such matters to a competent person.

Never galvanise or subject a shackle to other plating processes without the approval of the supplier.

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INSPECTION & MAINTAINCE

Maintenance requirements are minimal. Keep shackles clean, the threads free of debris and protect from corrosion.

Regularly inspect shackles & in the event of the following defects, refer the shackle to a competent person for thorough examination: illegible markings; distorted, worn, stretched or bent body; bent pin; damaged or incomplete thread forms; nicks, gouges, cracks or corrosion; incorrect pin; any other defect.

SAFE USE OF SHACKLES

Do not attempt lifting operations unless you understand the use of the equipment, the slinging procedures & the mode factors to be applied.

Do not use defective shackles or unidentified pins.

Shackles should be fitted so that the body takes the load along its centre line & is not subjected to side bending loads. When connecting several sling legs & similar applications, position them so that they do not impose a side load on the shackle jaws. Use spacers to position them if necessary.

Ensure the pin is correctly screwed into the shackle eye. Tighten by hand, use a small bar to lock the collar to the shackle eye. Check that the thread is fully engaged with the body but is not too long so that tightening causes the body to deform.

With bolt and nut pins ensure the nut jams on the inner end of the thread & not on the eye of the shackle. The bolt should be free to rotate with minimal side float. The split cotter pin must be fitted before making a lift.

When using shackles with slings in choke hitch, or in other applications where there may be movement, place the pin through the eye or link of the sling and never in contact with the bite of the choke or moving parts which may cause the pin to unscrew.

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