## **Operational Excellence**

### Instructions for the safe use of: Gas Cylinder Racks

The information in this leaflet should be passed to the user of the equipment.

This document is issued in accordance with the requirements of DNV 2.7-1 and EN 12079. It outlines the care and safe use of GAS CYLINDER RACKS and 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 GAS CYLINDER RACKS. It may be necessary to supplement this information for specific operations.

### Always

Ensure operators wear appropriate personal protective equipment (PPE) e.g. gloves, hard hat, safety glasses, and safety footwear.

Ensure operators are trained and competent.

Ensure dangerous goods are shipped in compliance with the requirements of the IMDG Code.

Never

Use equipment without carrying out a pre-use inspection.

Use equipment that has not been periodically inspected and certified.

Replace lifting sets without the approval of a competent person.

Use equipment out with its intended purpose.

### Pre-use Inspection

Ensure doors function correctly with hinges and locking gear free moving and undamaged.

Ensure loading ramps function correctly with hinge bolts and locking mechanism free moving and undamaged.

Ensure securing devices function correctly with hinges, cams, pins, etc., free moving and undamaged.

Ensure tie down points are in place and fit for purpose.

Ensure the chain and carabineer are in place and fit for purpose where applicable.

Ensure gratings are secured to side panels.

Ensure the data plate is legible and demonstrates sufficient certification.

Ensure the safety, identification, and information markings are clear and legible.

Ensure the lifting set is correctly fitted with shackles and split pins fully engaged.

Ensure the lifting set is free of obvious signs of damage, e.g. abrasion, corrosion, wear, chemical attack, and mechanical damage.

### Loading & Operation

Open door and secure in the open position using tiebacks where applicable.

Release ramp securing device.

Lower ramp carefully ensuring enough clearance from person(s).

Load cylinders by mechanical means such as a gas cylinder truck or trolley where possible.

Ensure cylinders are stored vertically and are of equal diameter.

Ensure the load is as central to the container as practically possible, by using both securing arms.

Ensure the load is equally distributed and does not exceed the payload of the unit.

Ensure cylinders without valve protection are capped.

Engage cylinder securing device ensuring cylinders are adequately restrained and locking pins are located correctly.

Raise ramp ensuring locking mechanism is fully engaged.

Close door and locking gear engaging cams in keepers.





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#### **Movement & Transport**

Ensure all signs and placards are in place and in compliance with the IMDG Code.

Ensure roof, forklift pockets, frame, etc., is free of potential dropped objects.

Ensure the total consignment weight does not exceed the maximum gross weight of the unit.

Ensure all lifting is performed with carried out through the forklift pockets or dedicated lifting set.

Lifting must be carried out by competent persons in accordance with an appropriate lifting plan.

#### Maintenance & Inspection

Moving parts such as hinges, locking gear, shackles, etc., must be regularly lubricated to ensure free movement and prevent corrosion.

Paintwork damage must be regularly treated to prevent corrosion.

Lifting sets shall be subjected to as a minimum:

- Thorough examination at intervals not exceeding 12 months.
- Non-destructive examination, and visual examination of components and joining links at intervals not exceeding 48 months.
- Non-destructive examination, and visual examination of chain sling legs at intervals not exceeding 48 months.

Gas cylinder racks shall be subjected to as a minimum:

- Visual examination at intervals not exceeding 12 months.
- Non-destructive examination, and visual examination at intervals not exceeding 48 months.
- Proof load test, non-destructive examination, and visual examination after substantial repair or alteration.





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### Gas Cylinder Rack

Note. Design may not be wholly representative of the actual CCU.

