

## Equipment Compliance Certification and Inspection Solutions

### Comaea Focus on safety: C004 Containers – Skids (IMO MSC/Circ.860 / DNV.2.7-1)

#### What are they?

Containers, Baskets, cylinder racks, Skids, Skips, etc many terms/names can be given to this group (We are not discussing man baskets here) – what we can agree on is the design type under this group – When discussing these 'Offshore' Containers we are discussing anything with a roof based lift, whether it is specially designed stacking/lifting points or padeyes. What is not covered is the Bottom lift Onshore master skids that are used for Rig moves on such equipment as: Accommodation, Mud tanks, etc.

**DISCUSSION: are the padeyes found on containers etc inspected under line 14&31 in Swim matrix?**

#### Standards

**IMO MSC/Circ. 860:** Guidelines for offshore container approval

**DNV 2.7.1:** Standard for certifying offshore containers

**EN 12079:** Standard used in CEN member states – also adopted in many places as a global standard

**ISO10855-1:** New ISO standard on Design, manufacture of offshore containers

#### What applies to me?

##### International standards:

Basically is your 'Container/Skid' OEM certified in line with the above? If not then you may need to have an approved company certify that the equipment meets build standards and load requirements

##### Aramco SWIM:

**Matrix line 13:** 6 monthly visual, annual NDT (Where?), Load Test after Repair/Mod, ID Label, Color Coding.

**(Does not just apply to the 'lifting points' it applies to the entire 'container' inspection must reflect this)**

#### Section 3:

1. 4 part shackles to be used on all fixed pad-eye anchor points
2. All cargo baskets, etc shall be an OEM Certified 4-point lift design, with ID plate attached

#### Sections from DNV 2.7-1 that can be used during a visual inspection:

##### (4.4.8) Doors and hatches

Locking devices shall be secure against opening of the doors during transport and lifting, Double doors shall have at least one locking device on each door, locking directly to the top and bottom frame, locking arrangement shall be protected to prevent dislodgment by impact.

Hinges shall be protected against damages from impact loads, Doors shall be secured in the open position

##### (4.4.6) Fork lift pockets

Installed in the bottom structure with closed top, minimum opening of the forklift pockets shall be 200mmx90mm

Forklift pockets shall be located such that the container is stable during handling and driving with forklift truck

Pockets shall be located as far as practical, centre distance shall be at least 900mm apart (where possible) but not more than 2050mm. Fork pockets shall extend across the full width of the base frame and shall; pass through or be attached to the base.

##### (4.4.1) Pad eyes

Padeyes shall not protrude outside the boundary of the container, but may protrude above the top of the container. Pad eyes shall be aligned with the sling to the centre of lift with maximum tolerance of +/- 2.5 degrees. Diameter of holes in padeyes shall match the shackle used, clearance between the shackle pin and padeye hole shall not exceed 6% of shackle pin diameter. Thickness of the pad eye at the hole shall not be less than 75% of the inside width of the joining shackle, padeyes shall be welded to the frame with full penetration welds

#### Common misinterpretations and equipment issues:

Welding a plate/doubler to container securing points – this is not welding directly to the frame – need to ensure this meets all load requirements and placement requirements – Using a Hydraulic pull tester is not an acceptable load test in this situation as you are only testing the connection of padeye to doubler – you must load test using crane to pick up container / basket

Welding a certified padeye to a frame of unknown origin – padeye has COC so this is ok? Not really as the frame may not be certified/capable to be lifted – there is more chance of frame / wall failure than a padeye failure.

Welding single padeye to gas cylinder trolley – not an approved frame and not an OEM certified 4-point lift design.



Comaea Middle East