

# **Surveyor's Notebook**

## **GANGWAYS AND ACCOMMODATION LADDERS**

Surveyors have noticed during ship visits that embarkation gangways are sometimes dangerously or incorrectly rigged, damaged, or poorly illuminated, and that hoisting or lowering equipment is inadequately maintained.

Any of these defects on a gangway can lead to substantial claims for personal injury or fatality.

Owners should obtain a copy of MSC.1/Circ.1331 issued on 11 June 2009, entitled 'Guidelines for Construction, Installation, Maintenance and Inspection/Survey of Means of Embarkation and Disembarkation', which is available from the IMO website free of charge.

The document highlights the main points of gangway safety, testing, maintenance and inspection.

### **Location**

The means of embarkation and disembarkation should be positioned clear of the working area and should not be placed where cargo or other suspended loads may pass overhead.

### **Lighting**

Lighting should illuminate the means of embarkation and disembarkation, the position on deck where persons embark or disembark, and the controls for the arrangement.

### **Lifebuoy**

A lifebuoy equipped with a self-igniting light and a buoyant lifeline should be available near the embarkation and disembarkation arrangement for immediate use.

### **Arrangement**

Each gangway should be of such a length to ensure that, at a maximum design operation angle, the lowest platform will be not more than 600mm above the waterline in

the lightest seagoing condition, as defined in SOLAS regulation III/3.13.

The arrangement at the head of the gangway should provide direct access between the gangway and the ship's deck by a platform securely guarded by handrails and adequate handholds. The gangway should be securely attached to the ship to prevent overturning.

### **Marking**

Every accommodation ladder or gangway should be clearly marked at each end with a plate showing the restrictions on safe operation and loading, including the maximum and minimum permitted design angles of inclination, design load and maximum load on bottom end plate.

Where the maximum operational load is less than the design load, it should also be shown on the marking plate.

### **Testing**

At every five-yearly survey, the gangway should be operationally tested with the specified maximum operational load.

The winch should be tested as a part of the complete gangway unit through a minimum of twice hoisting and lowering of the gangway in accordance with the test requirement specified in international standards such as ISO 7364:1983.

Every new gangway should be subjected on installation to a static load test of the specified maximum working load.

### **Positioning**

Gangways should not be used at an angle greater than 30° from the horizontal and accommodation ladders should not be used at an angle greater than 55° from the horizontal, unless designed and constructed for use at angles greater than these and marked as such. Gangways should never be secured to a ship's guardrails unless they have been designed for that purpose. If positioned through an open section of bulwark or railings, any remaining gaps should be adequately fenced.

Adequate lighting for means of embarkation and disembarkation and for the immediate approaches should be ensured from the ship and/or the shore in hours of darkness.

### **Rigging (safety net)**

A safety net should be installed in way of gangways where it is possible that a person may fall from the means of embarkation and disembarkation or between the ship and quayside.

### **Maintenance**

Accommodation ladders and gangways, including associated winches and fittings, should be maintained and inspected at appropriate intervals as required by SOLAS regulation III/20.7.2, in accordance with manufacturers' instructions. Additional checks should be made each time the accommodation ladder and gangway is rigged, looking out for signs of distortion, cracks and corrosion. Close examination for possible corrosion should be carried out, especially when an aluminium accommodation ladder or gangway has fittings made of mild steel.

Bent stanchions should be replaced or repaired, and guard ropes should be inspected for wear and renewed where necessary.

Moving parts should be free to turn and should be greased as appropriate.

The lifting equipment should be inspected, tested and maintained, paying careful attention to the condition of the hoist wire. The wires used to support the means of embarkation and disembarkation should be renewed when necessary, as required by SOLAS regulation II-1/3-9. Arrangements should be made to examine the underside of gangways at regular intervals.

All inspections, maintenance work and repairs to gangways should be recorded in order to provide an accurate history for each appliance. The information should include the date of the most recent inspection, the name of the person or body carrying out that inspection, the due date for the next inspection and the dates of renewal of support wires.

### **Gangways**

The following items on the gangway should be thoroughly examined during annual surveys required by SOLAS regulations I/7 and I/8, and checked that they are in satisfactory condition:

- treads
- side stringers, cross-members, decking and deck plates

- all support points such as wheel and rollers
- stanchions, rigid handrails and hand rope

### **Winches**

During annual surveys required by SOLAS regulations I/7 and I/8, the following items should be examined:

- brake mechanism, including condition of brake pads and band brake, if fitted
- remote control system
- power supply system (electric/air motor)

### **Key points and recommendations**

- owners should obtain a copy of MSC.1/Circ.1331 issued on 11 June 2009, entitled 'Guidelines for Construction, Installation, Maintenance and Inspection/Survey of Means of Embarkation and Disembarkation' which highlights ship's gangway safety, testing, maintenance and inspection
- ensure that the gangway will not block or interfere with shore side equipment
- ensure that the gangway is well illuminated
- ensure that the ship's gangways are load-tested every five years
- ensure that the gangway is correctly rigged and positioned
- ensure that gangways and hoist/lowering motors, fixtures and fittings are inspected as part of the ships planned maintenance routines

*(Article extracted from The Standard Club's publication – Standard Safety)*