

## **Inspection of Life Boat Launching Equipment**

As a result of continuing injuries and fatalities in connection with the launching of lifeboats the following guidance has been prepared to provide ships crews with an overview of what must be included in any maintenance or inspection program to be applied to any weight transferring equipment.

While much attention has been given to the problems surrounding the use of on-load release hooks, it is dangerous to downgrade the importance of the other component parts which can have equally serious consequences on their failure.

This guidance can be applied to derricks, cranes jib or gantry, elevators, life boat launching arrangements (gravity falls and free fall boat retrieval rigs). For the purpose of this Bulletin references made are having regard to lifeboat gravity falls.

This guidance is written as an overview for preventative inspections and does not replace the equipment specific maintenance and inspection instructions issued by the equipment manufacturer.

This Bulletin should be read in conjunction with MSC.1/Circ.1206

### **General Approach**

Identifying the load bearing components

Structural elements (all non-moving components)

Structural element will either be in tension or compression and where adequately painted will not suffer loss of strength due to corrosion. However elements which connect to base plates and foundations may be prone to corrosion around their weld connections (bracketing)

Loss of element strength will result from mechanical damage including misalignments, deformations, and cracking. (These damages may not only be the result of overloading but may occur through normal use where operating errors or equipment failures have previously occurred.

When we consider the equipment's foundations the condition of the under deck reinforcing shall also be assessed, especially on older ships where the foundation plate is located over a ballast tank.

Running Gear components (items are those which may suffer wear vibration, fatigue and mechanical damage)

- Winch drive
- Winch clutch
- Winch brake
- Wires including splices, clamps and drum fixing
- Pulleys
- Shackles
- Swivels
- Hooks

### **Inspecting the Lifting/Launching Equipment**

Each piece of equipment is to be considered carefully so that the component parts may be evaluated with regard to risk of failure and consequences of that failure. Any component assessed that its failure would result in the load (in this case the lifeboat) being no longer supported has to be considered as a priority. Following this assessment an inspection program can then be developed taking each component in turn.

For the purpose of a complete assessment those elements only used in maintenance, boat retrieval or part of boarding procedure such as hanging off pennants, restraining devices, lashings and gripes shall be included in the assessment of the equipment.

### Structural Elements

- Corrosion damage, general wasting and/or crack propagation
- Corrosion protection, adequate painting
- Check for fairness in components to detect any deflections
- Inspect hollow tubes, pillars or jibs for indents
- Connections
- Corrosion at welds propagating cracks
- Corrosion in way of bolt holes causing over sizing
- Bolts & Pins loose (failed locking arrangement) loose vibration possible necking of bolt or pin.
- Locking arrangement for nuts on threaded connections.

### Running Gear

- Wires within allowed life time (including end for ending)
- Wires no evidence of strand breakages
- Wires corrosion protection, greased
- Pulleys lubricated, pins locked
- Slides lubricated
- Shackles pins locked
- Swivels free
- Pins and bolts where fitted (pulleys and swivels) are correctly locked in place.

### Winch

- motor connection to drum, solid drive or clutch
- Drum brake

### Control Devices

- winch speed
- winch direction
- winch brake operation
- limit switches

### **Operation of the Equipment**

When operating the equipment for actual or simulated launching the manufacturer's instructions must be followed exactly. Where any deviation in the approved procedure is to be used the consequences of this

deviation must be considered carefully.

*Example*

*Standard gravity life boat falls where pneumatic motors are taken from lockers and fitted by hand to the winch drive. The motor is held in place by twisting and engaging it with dogs.*

*Over the years these dogs become worn and in some cases bent.*

*This resulted in it becoming standard practice that a member of the crew would thread a long bar through a eye bolt on the motor and force the motor to remain engaged with the dogs while running.*

*Result one day the motor jumped spun out of the dogs and seriously injured the crewman holding the bar.*

**The operation of any launching equipment must be under the strict supervision of a person experienced in the equipment's operation.**