

# Hatch cover maintenance

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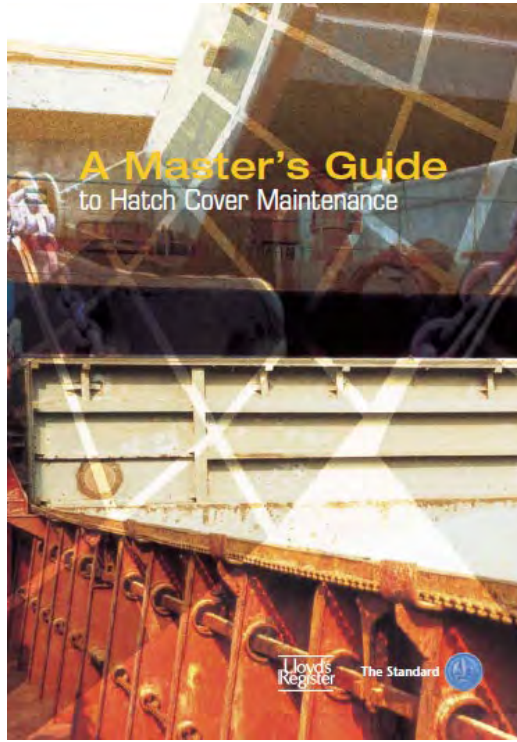
# Who am I?

- Global Head of Technology for Survey and Inspection at Lloyd's Register
- Based in LR's Global Technology Centre in Southampton, UK, and working in their Technical Policy Group
- Responsible for providing worldwide technical leadership and governance, setting survey policy and ensuring consistency of standards across the general discipline in Lloyd's Register Marine and Offshore
- LR's representative on the IACS Survey Panel
- Nearly 30 years with LR, during which time spent almost twenty years as a Surveyor and manager in operations undertaking marine and offshore surveys in various locations around the world, both on new construction projects and on existing ships
- Followed by a period in Classification Group in LR's Headquarters in London responsible for Dry Cargo Ships
- Moved to Technical Policy Group in 2015 as Survey Regulations and Procedures manager
- Moved into current roll in 2020



# A Master's Guide to: Hatch cover maintenance

2002



2021



# Regulations, Certificates and Guidance

- **International Convention on Load Lines, 1966, as Amended by the Protocol of 1988**
  - Weathertight means that in any sea conditions water will not penetrate into the ship.
- **SOLAS (International Convention for the Safety of Life at Sea)**
  - **Chapter II-1 - Construction** - Structure, subdivision and stability, machinery and electrical installations Safety Construction
  - Safety Construction Certificate
- **IMO Resolution MSC.169(79) - Standards for Owners' Inspection and Maintenance of Bulk Carrier Hatch Covers**
  - Defines requirements for the owners' inspection and maintenance of cargo hatch covers on board bulk carriers
  - Mandated in **SOLAS Chapter XII** - Additional safety measures for bulk carriers - **Regulation 7** - Survey and maintenance of bulk carriers
- **Class Rules and Certificate**

Cont...



cont...

## Regulations, Certificates and guidance

### IACS

- Rec 14 Rev.2 Corr.1 Oct 2005 'Hatch cover securing and tightness'
- Rec 15 Rev 3 Aug 2013 'Care and survey of hatch covers of dry cargo ships - Guidance to owners'
- Rec 55 Rev June 2016 'GENERAL DRY CARGO SHIPS - Guidelines for Surveys, Assessment and Repair of Hull Structure'
- Rec 76 Rev 2 Corr.1 Sept 2007 'IACS Guidelines for Surveys, Assessment and Repair of Hull Structure – Bulk Carriers'
- IACS UR Z17 'Procedural Requirements for Service Suppliers'
  - Annex 1 - 2. Firms engaged in tightness testing of closing appliances such as hatches, doors etc.



# Surveys and Port State Control (PSC)

- **Surveys**
  - Periodic
  - Occasional
- **PSC**
  - General Cargo Ships more likely to be detained than other type
  - Watertight / Weathertight Integrity scores the highest
- **Casualties**
  - EMSA Report 2011 -2019 casualties highest on Bulk Carriers and General Cargo
  - Failure of equipment and lack of maintenance are several of the reasons



Source gCaptain

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# Main Areas of Concern

## Coaming –

- Stays
- Top plate / trackways
- Compression bar
- Landing/bearing pads
- Locators and stoppers
- Cut-outs
- Cleat mounts
- Drainage channel
- Drain non-return valves (also, closing for Dangerous Goods)
- (Connector for Gas Meter)

## Covers –

- Cover plate
- Cross joints (drainage)
- Cleats
- Rubber gasket
- Gasket channels
- (Ballast Holds and venting arrangements)

## Opening and closing -

- Wheels
- Chains
- Hydraulics

# Maintenance and repairs

## Maintenance –

- Lack of maintenance
- Regular maintenance – more effective and less expensive
- In accordance with Manufacturer's requirements
- IMO Resolution MSC.169(79) - Standards for Owners' Inspection and Maintenance of Bulk Carrier Hatch Covers
- Keep records

## Spares –

- Sufficient spares (cleats, wedges and different shapes of rubber packing)
- Use the manufacturer's approved spare parts.
- Rubber packing and adhesives have a limited shelf life

## Operation and maintenance manual –

- Opening and closing instructions
- Maintenance requirements and specifications for packings, securing devices and operating items
- Cleaning instructions for the drainage system
- Corrosion prevention instructions
- List of spare parts



## cont... **Maintenance and repairs**

### **Repairs –**

- Hatch covers and coamings are approved pieces of equipment.
- Unapproved repairs and incorrect repairs
- Comply with approved as-built drawings
- Follow manufacture requirements
- The manufacturer's manual should be consulted, or the manufacturer should be contacted for advice
- Use qualified service and repair companies
- Use manufacturer recommended spares
- Call Class Surveyor to agree repairs

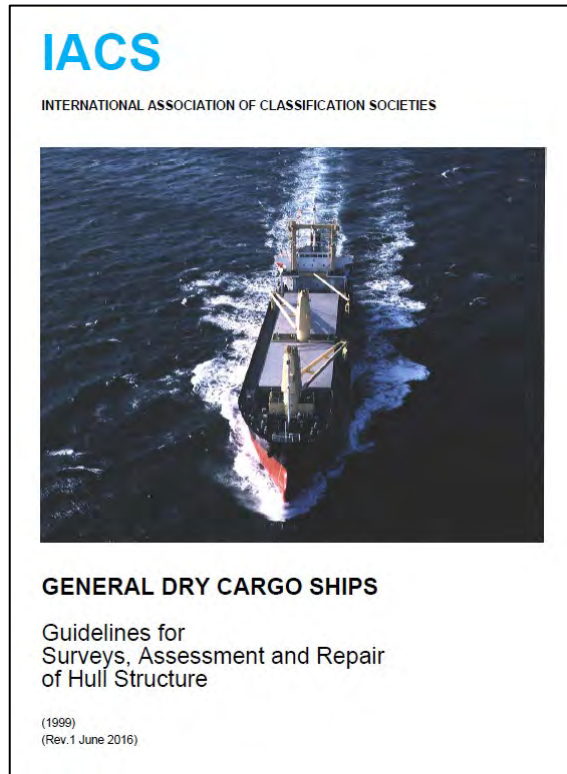
### **Common repair issues –**

- Repairs to compression bars by unqualified welders (stevedors) and/or incorrect steel.
- Use sub-standard spare parts.
- Incorrect cleat fitted
- Incorrect gasket material – grade, shape, length
- Damage to hatch cover

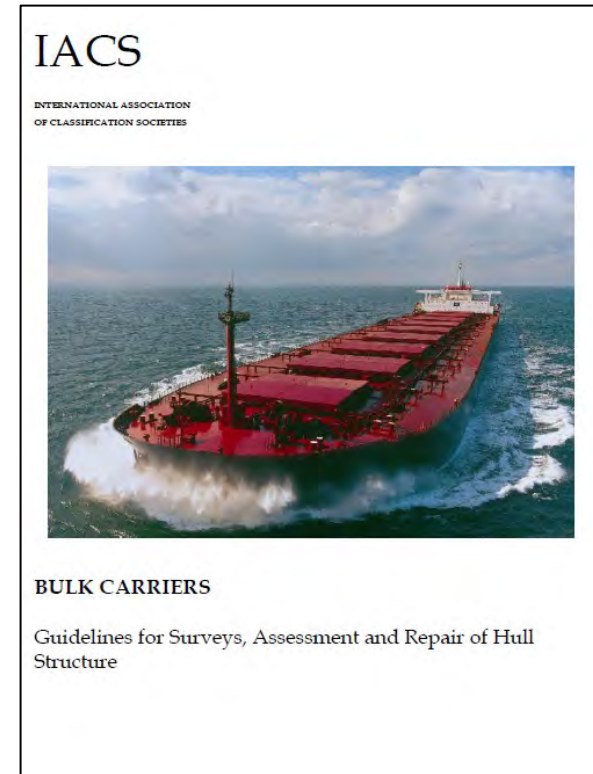


# IACS GUIDES

Rec 55 GENERAL DRY CARGO SHIPS - Guidelines for Surveys, Assessment and Repair of Hull Structure



IACS Rec 76 Guidelines for Surveys, Assessment and Repair of Hull Structure – Bulk Carriers



# Thank you.

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