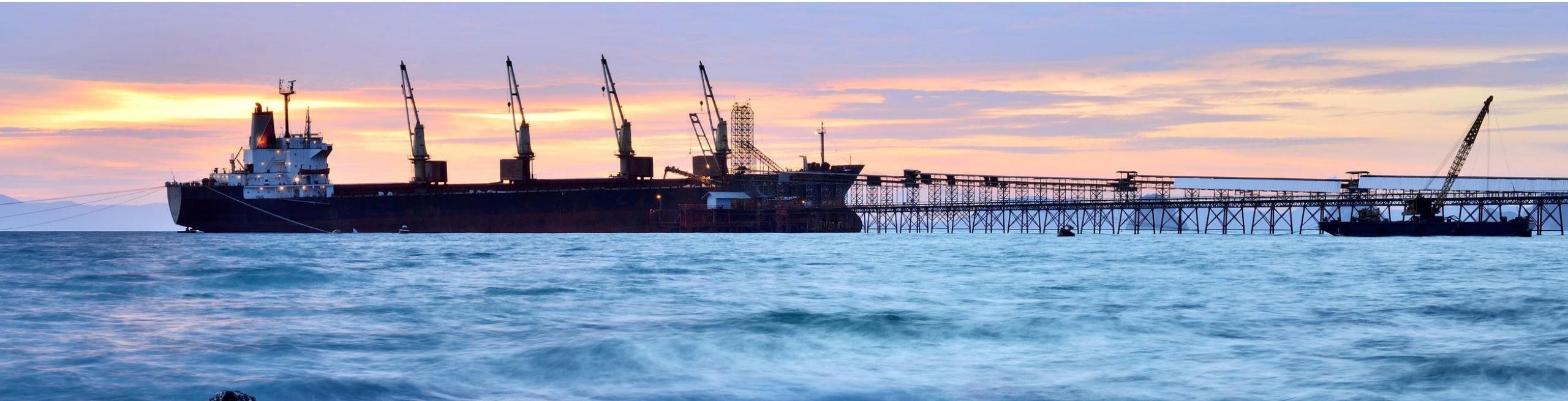


# ANCHOR AWARENESS

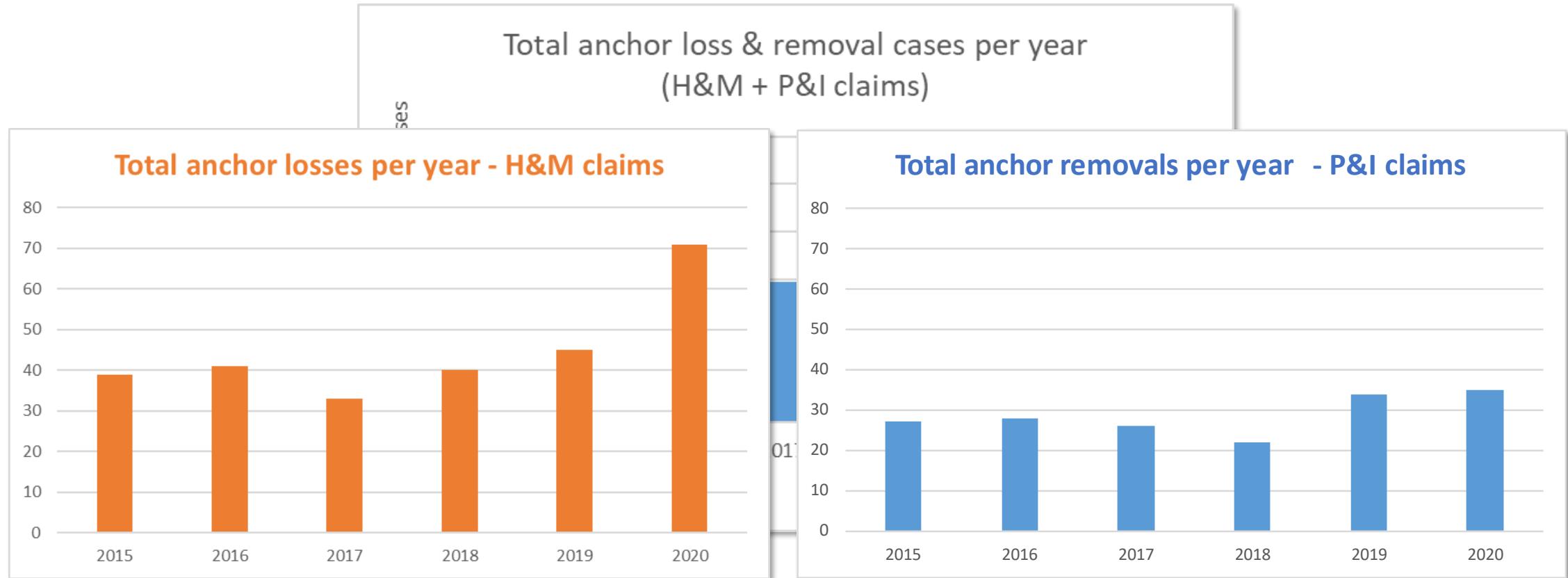
**Jarle Fosen**  
Senior Loss Prevention Executive  
17 November 2021



*"Accidents will happen, and the identification of risks, and possible ways to reduce and prevent them, are key priorities for everyone at Gard"*

# ARE MORE ANCHORS LOST NOW THAN BEFORE?

ANCHOR LOSS AND ANCHOR REMOVAL CLAIMS STATISTICS, 2015 - 2020



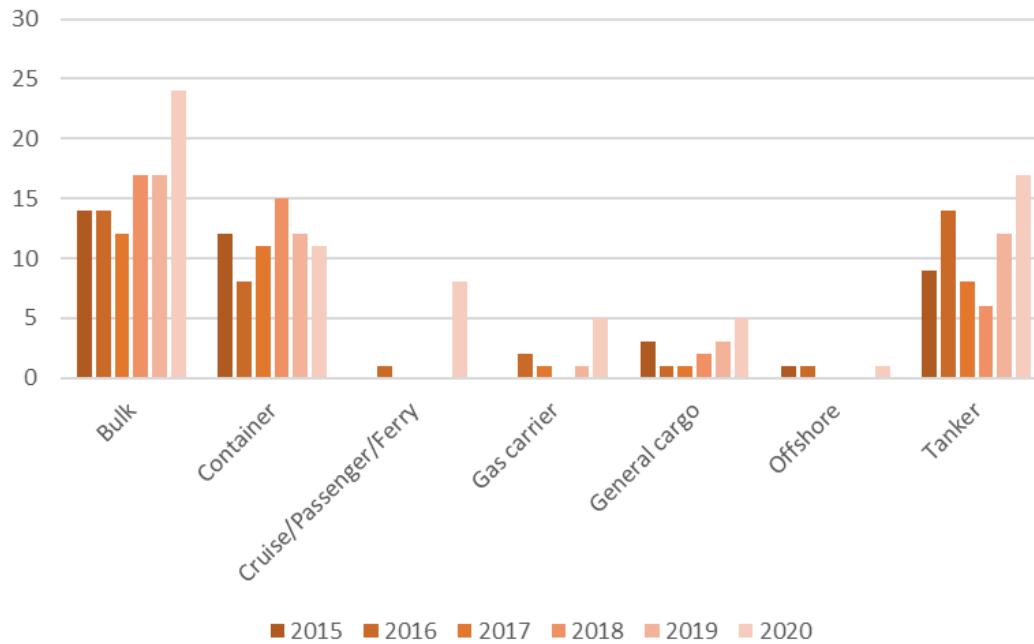
Source: Gard claims data

# WHICH SEGMENTS ARE LOSING MORE ANCHORS?

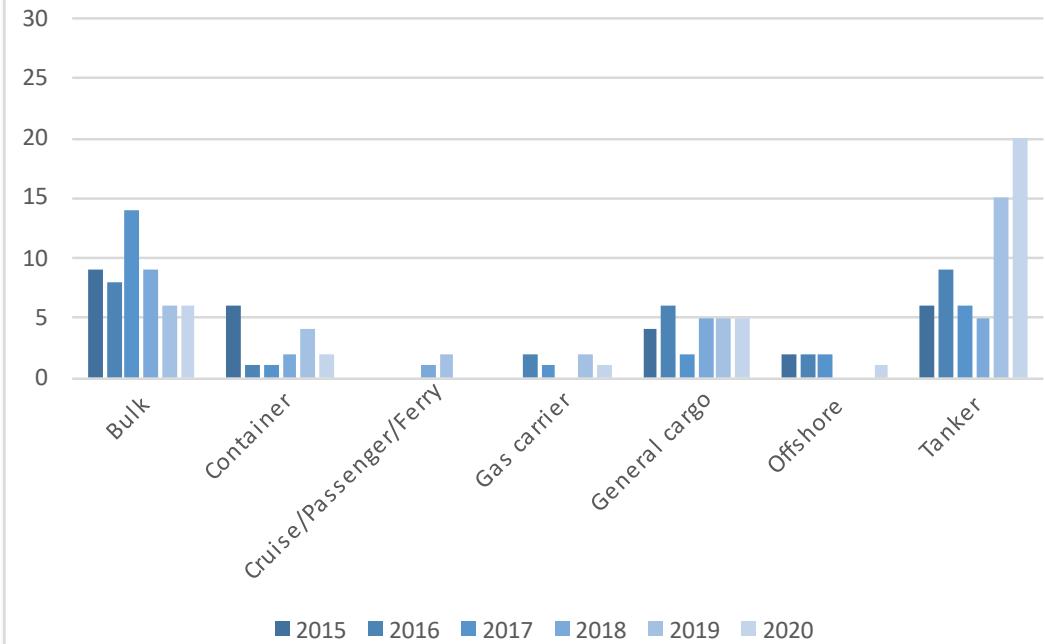
ANCHORS LOSS AND ANCHOR REMOVAL CLAIMS STATISTICS, 2015 - 2020



Total anchor losses per segment per year



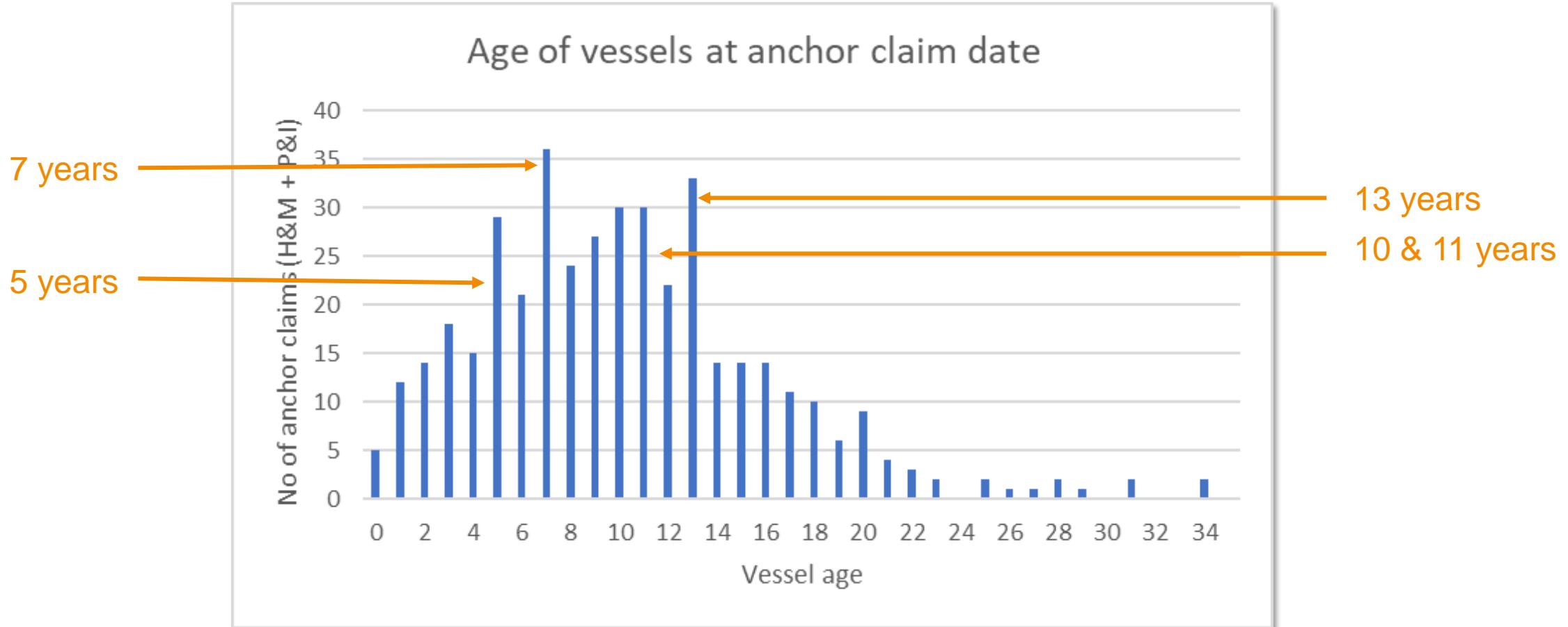
Total anchor removals per segment per year



Source: Gard claims data

# DOES VESSEL AGE MATTER?

ANCHOR LOSS AND ANCHOR REMOVAL CLAIMS STATISTICS, 2015 - 2020

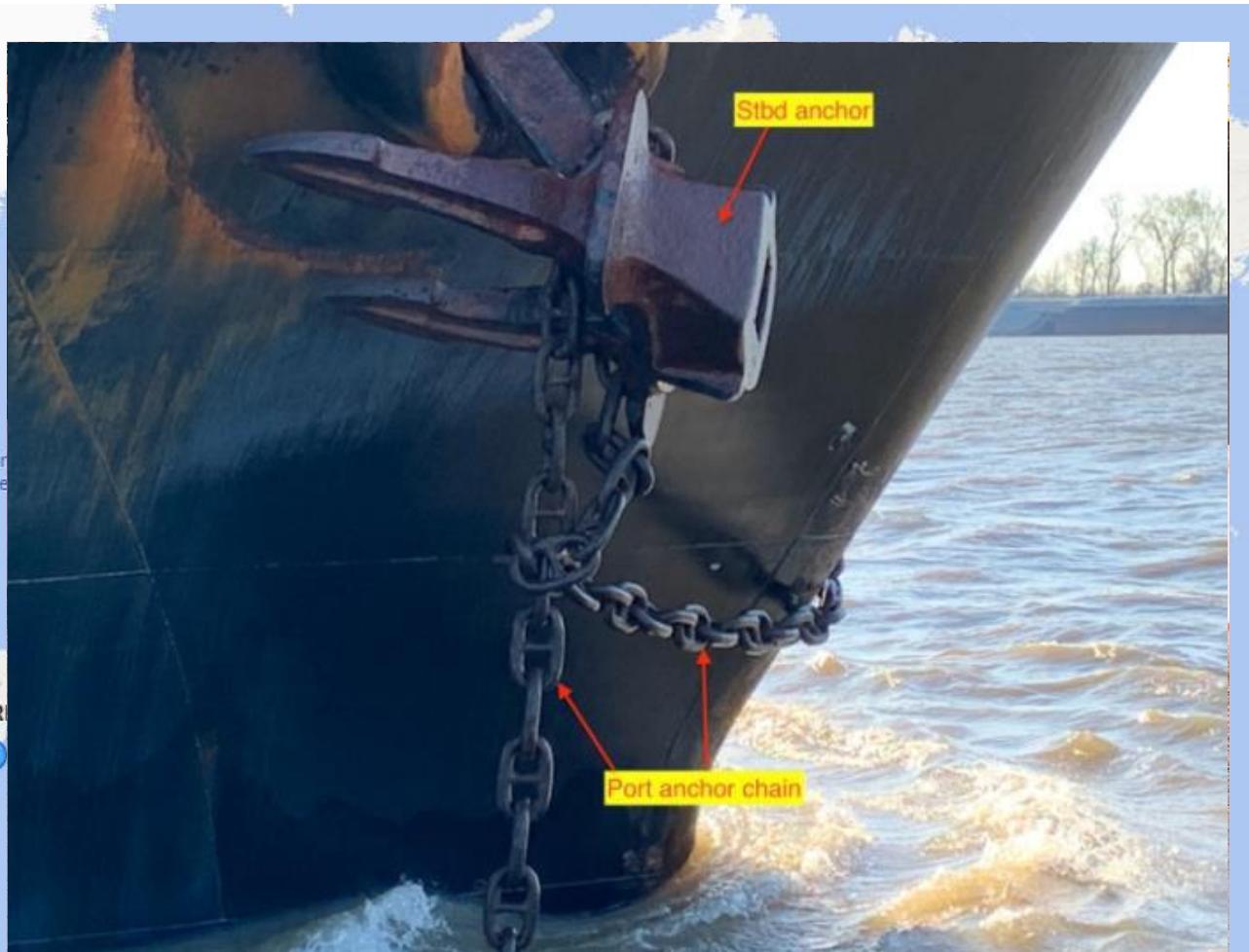
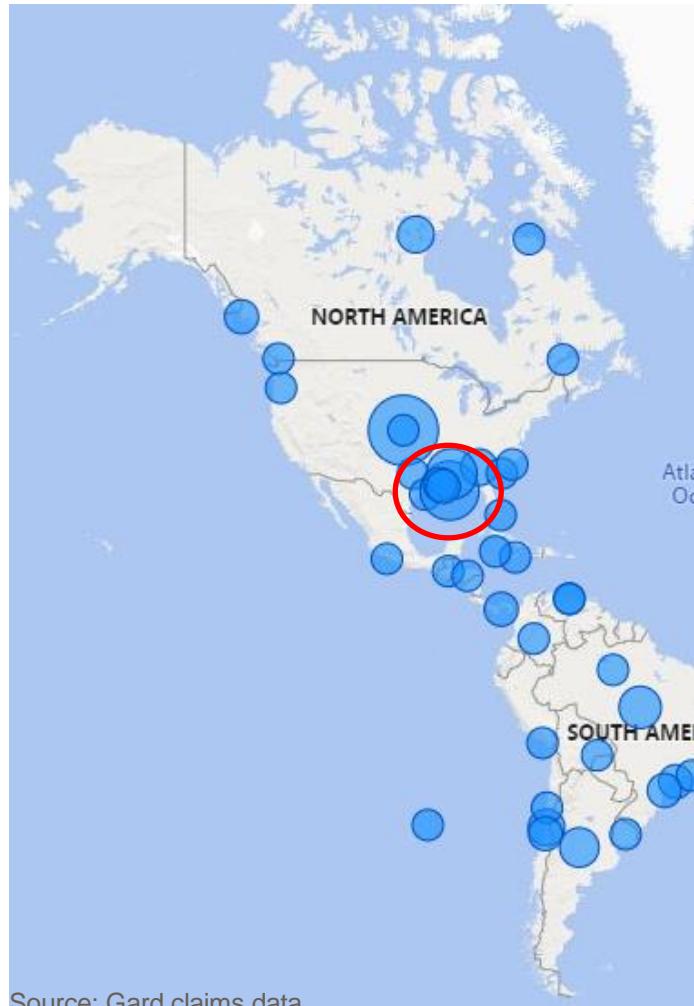


Source: Gard claims data

Are anchor losses an early midlife crisis?

# WHERE ARE THE ANCHORS LOST?

ANCHOR LOSS AND ANCHOR REMOVAL CLAIMS STATISTICS, 2015 - 2020



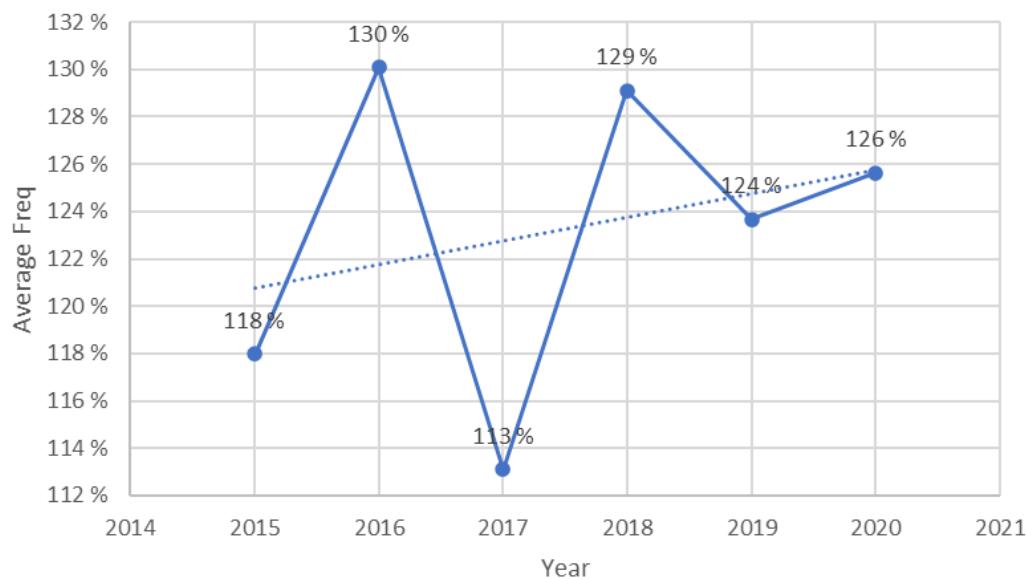
Source: Gard claims data

# DOES ANCHORING FREQUENCY AND TIME AT ANCHORAGE MATTER?

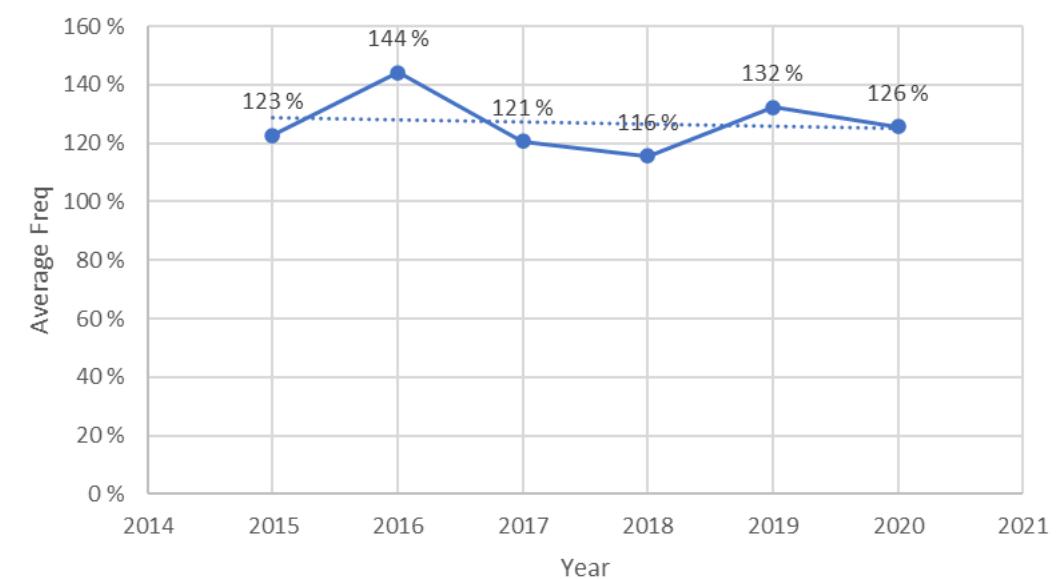
ANCHOR LOSS AND ANCHOR REMOVAL CLAIMS STATISTICS, 2015 - 2020



Average frequency of number of times anchored per year



Average frequency of duration at anchor per year



A vessel with an anchor claim, dropped the anchor on average 28% more frequently than a vessel without an anchor claim

A vessel with an anchor claim, spent on average 27% longer time at anchor than a vessel without an anchor claim

Picture source: [www.shipmap.org](http://www.shipmap.org)

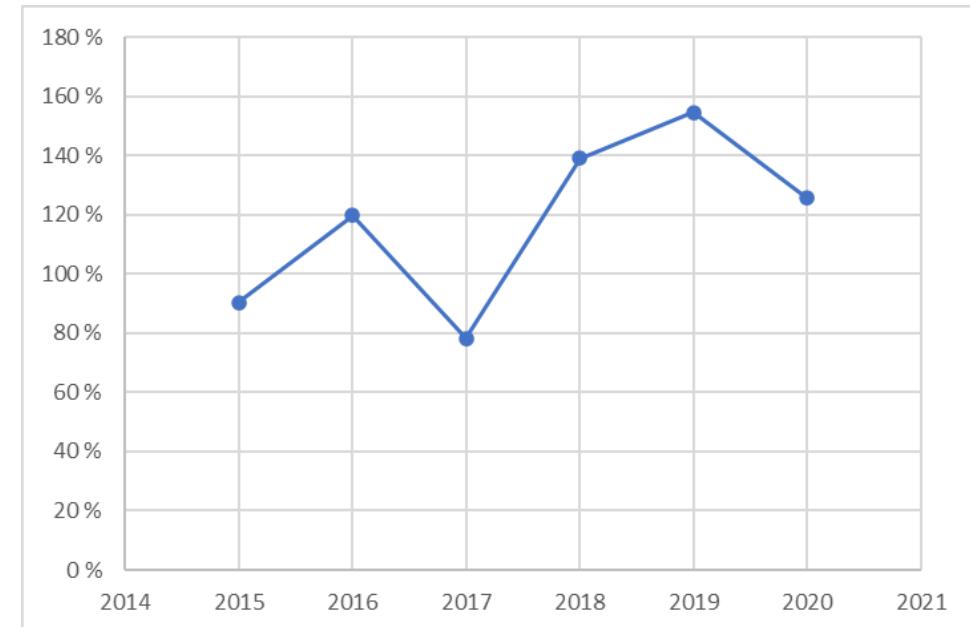
Graph source: Gard claims data & AIS movement data

# DOES BAD WEATHER MATTER?

ANCHOR LOSS & ANCHOR REMOVAL CLAIMS STATISTICS, 2015 - 2020



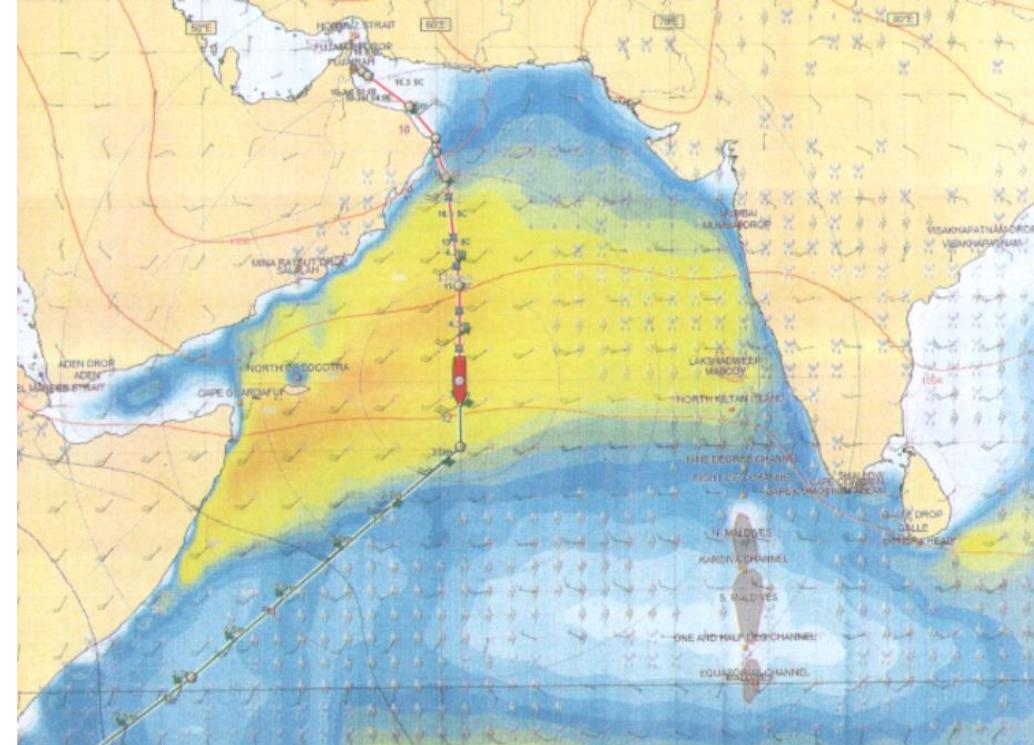
Average frequency of time spent in bad weather during the course of a year



A vessel with an anchor claim spent on average 18% longer time\* in bad weather than a vessel without an anchor claim

# CASE STUDY 1 – ANCHOR LOST AT HIGH SEAS

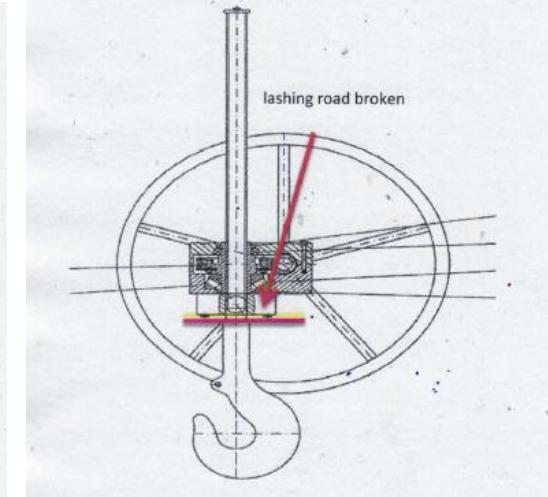
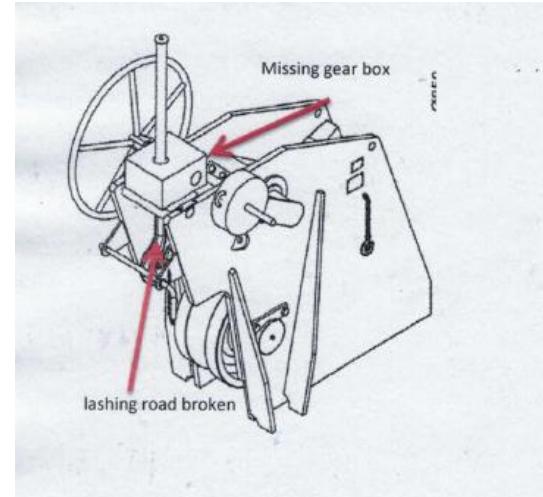
CROSSING A MONSOON WHILE UNDERWAY FROM FUJAIRA TO MOMBASA



Vessel type: 2700TEU container ship  
Class: DNV  
Length: 221m

# CASE STUDY 1 – ANCHOR LOST AT HIGH SEAS

## EXTENT OF THE DAMAGE



Was the chain stopper and break engaged during the voyage?

# CASE STUDY 2 – ANCHOR LOST AT ANCHORAGE

NORTH WESTHINDER ANCHORAGE OUTSIDE ANTWERP



Vessel type: 17000TEU container ship

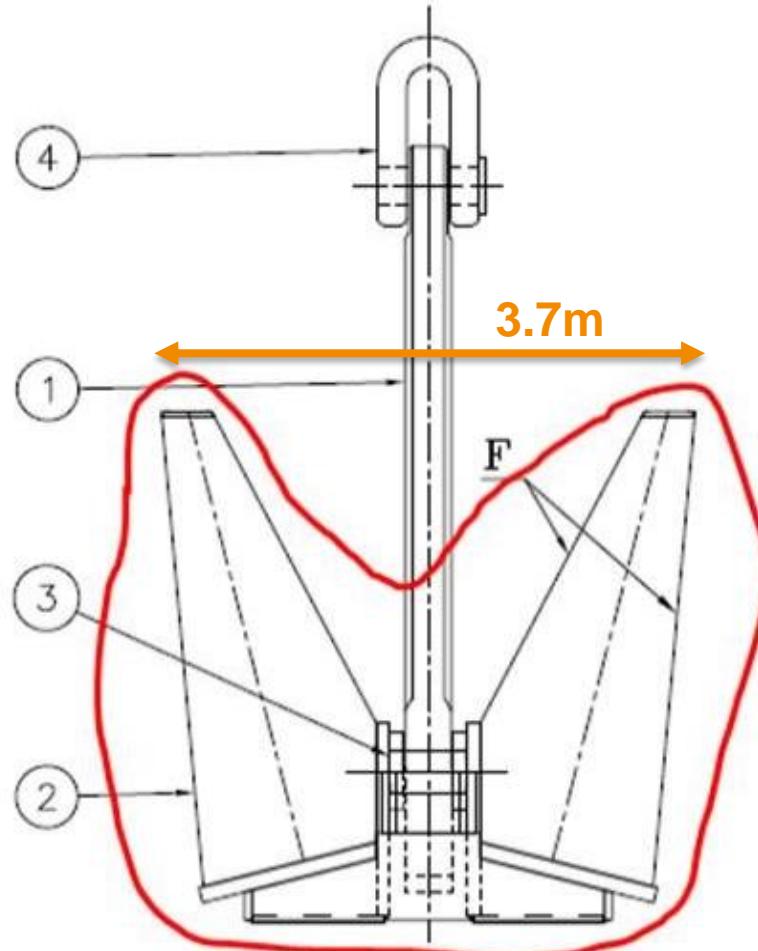
Class: DNV

Length: 369m



# CASE STUDY 2 – ANCHOR LOST AT ANCHORAGE

MISSING ANCHOR HEAD AND FLUKES



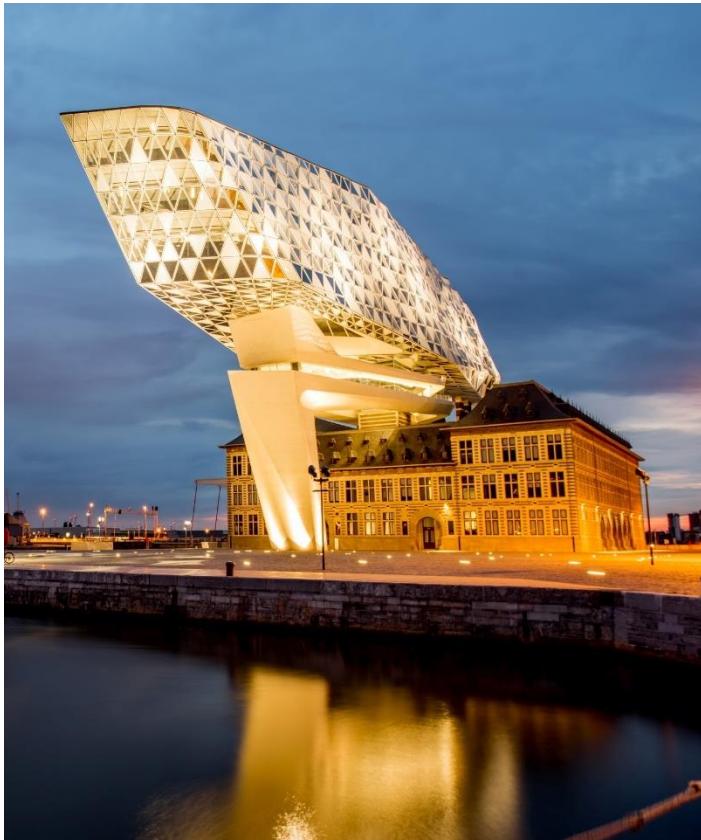
The circled in part is missing

# CASE STUDY 2 – ANCHOR LOST AT ANCHORAGE

NOTIFICATION TO PORT AUTHORITY, CLASS AND INSURANCE



## Inform Port Authority



## Inform Class

**DNV**

**SURVEY STATEMENT**

DNV Id No: [REDACTED]  
Job Id: [REDACTED]  
Revision No: 1  
Narrative annex not applicable

**Particulars of vessel**

Name of vessel: [REDACTED]  
Owner: [REDACTED]  
IMO Number: [REDACTED]

**Particulars of survey**

Survey station: [REDACTED]  
Place of survey: Technical support  
Survey started: Singapore (SGP, Singapore)  
Survey completed: [REDACTED]  
Lead surveyor: [REDACTED]  
Surveyor: [REDACTED]

**Issuance of CC for loss of port anchor fluke**

This is to confirm:  
That the following have been carried out remotely based on information submitted:

Surveys	Survey Code	Survey Name	Result
EQDAM.O		Equipment damage occasional - loss of port anchor fluke	Complete

**Follow-Up Surveys**

Condition of class(CC)

**CC** Imposed / Due date: [REDACTED]

The lost port anchor fluke to be brought back in order within due date. Meanwhile, following to be considered at ship Master discretion:

1. Tug assistance while entering and leaving port and while navigating in confined waters.  
2. Main engines/propulsion drivers shall be kept in stand-by while at anchorage.

**Anchoring arrangement > Anchoring mechanical system P (Pending)**  
The ship manager reported the loss of port anchor fluke on [REDACTED]

## Inform Insurers

“This is to notify that one of our vessels have sustained damages to port anchor during anchor heaving up operation at Westhinder anchorage, Antwerp.

We have received notice from the Port Authority regarding this incident and have been asked what measures we as Owners are taking for retrieve the lost anchor.”

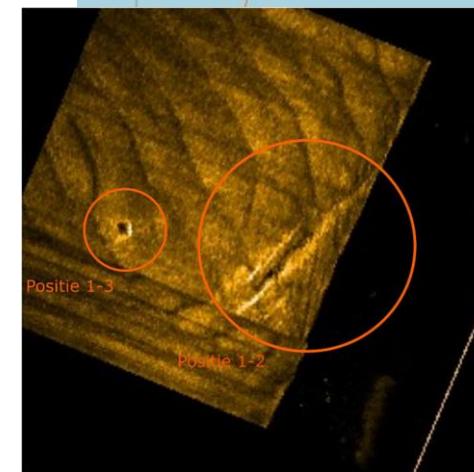
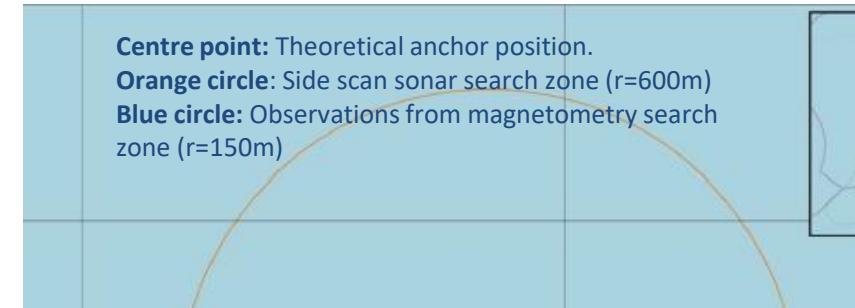
# CASE STUDY 2 - ANCHOR LOST AT ANCHORAGE

SEARCH AND RETRIEVAL OPERATIONS - GRAPNEL HOOK & SONAR SCANS

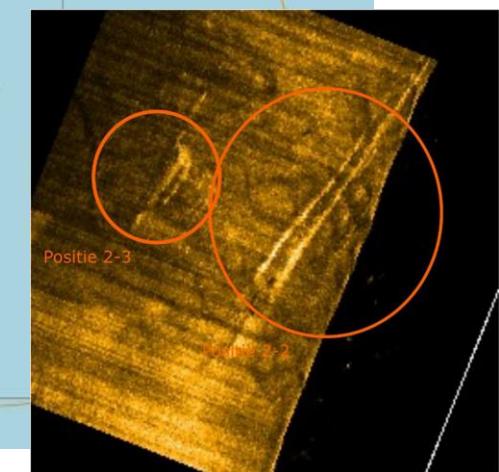


**Not possible to identify the contours of the anchor. Can only be verified by further diving works**

**Two possible spots identified using side scan sonar and magnetometry**



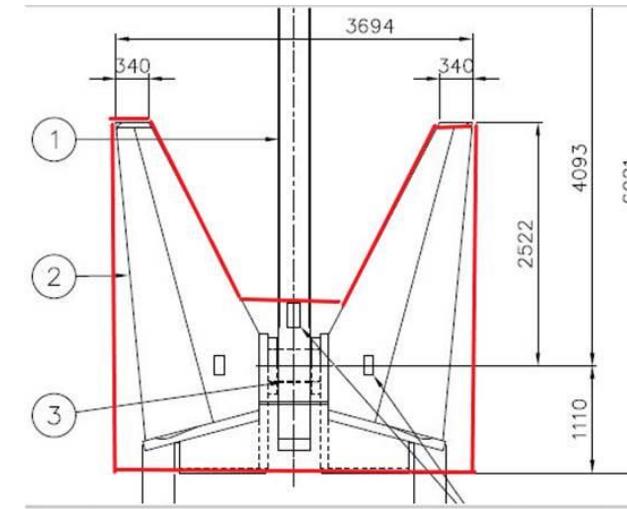
Object with dimensions approx.  
3.4m x 1.5m



Object with dimensions approx.  
6.0m x 1.5m

# CASE STUDY 2 - ANCHOR LOST AT ANCHORAGE

SEARCH AND RETRIEVAL OPERATIONS - DIVING WORK



The lost anchor  
was not found

**Port Authorities:** Owners will remain liable for any damage caused at later time by a lost anchor remaining on the seabed

# CASE STUDY 3 – LOST ANCHOR DURING LAY-UP

## SEVERAL LARGE CRUISE SHIPS TEMPORARILY LAID-UP IN EUROPEAN WATERS



### NARRATIVE / DAMAGE DESCRIPTION

In the morning of [REDACTED] 2020, the captain of the above vessel reportedly decided to heave the anchor (port side) due to dragging. When heaving the last shackle, the crew discovered that the anchor shank appeared with the head/fluke arrangement missing.



Photo 1: Port anchor with the head/fluke arrangement missing.

### CAUSE CONSIDERATION

It is difficult to come up with an unambiguous conclusion regarding the exact cause of the missing head/fluke arrangement, however, based on what can be observed in Photo 1 above, it seems that the anchor shank is broken in way of the connecting arrangement (head pin area) to the head/fluke. Our opinion is that the two most probable causes may be:

- the anchor has been exposed to forces beyond the design strength during dragging, or
- unfavourable handling by the crew during anchor heaving operation.

### NARRATIVE / DAMAGE DESCRIPTION

On [REDACTED] 2020, whilst anchored in the [REDACTED] the vessel reportedly encountered "some pretty strong winds". Due to the unfavourable weather conditions the ship, reportedly, started a swinging motion, which put perpendicular force onto the anchor. Propulsion and thrusters were connected, anchor was heaved up and the vessel proceeded to drifting position, however, when the anchor had been heaved, the crew observed the anchor shank to be bent – see photo below.

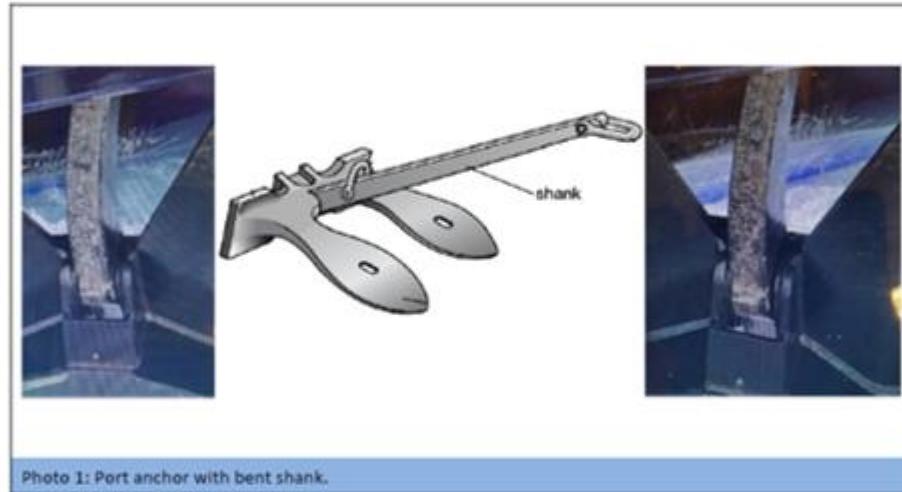


Photo 1: Port anchor with bent shank.

### CAUSE CONSIDERATION

It is difficult to come up with an unambiguous conclusion regarding the exact cause of the bent anchor shank, however, based on the presented information, our opinion is that most probably the anchor shank has been exposed to forces beyond the design strength – most probably due to exposure to the heavy weather conditions as described in section 6 above.

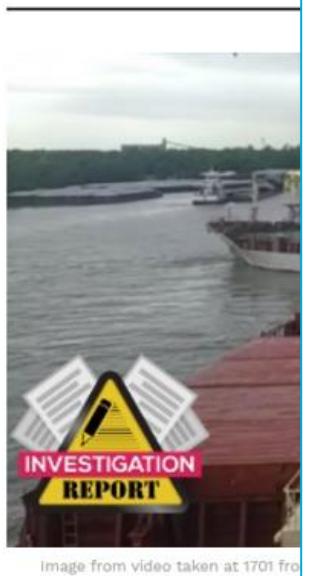
# RECENT HIGH-RISK ANCHOR DRAGGING CASES

ARE WE SEEING AN INCREASING TREND?



## NTSB investigation leads to ship collision

by The Editorial Team — August 20, 2021



### Marine Safety Information Bulletin Sector Los Angeles - Long Beach

Commander  
U.S. Coast Guard Sector  
Los Angeles - Long Beach  
1001 S. Seaside Avenue Bldg. 20  
San Pedro, CA 90731-0208

MSIB Number: 08-21  
Date: October 15, 2021  
Staff Symbol: 3  
Phone: (310) 521-3860  
Email: D11-SMB-SectorLALB-WWM@uscg.mil

#### Heavy Weather Advisory

This bulletin addresses the safety, security, and environmental protection of all vessels and ports within the Captain of the Port Zone to include approaches to the Ports of Los Angeles, Long Beach, and Port Hueneme. There is a forecasted severe wind event on Monday, October 25, 2021. In order to ensure the safe navigation of all vessels, the Captain of the Port encourages all commercial vessels greater than 1600 gross tons that are underway, not making way, to proceed under power prior to the forecasted weather.

To address all severe high wind events that often occur in the fall and winter months in Southern California, Coast Guard Sector Los Angeles - Long Beach reminds all vessels of the following:

1. When wind speed (including wind gusts) exceeds 35 knots forecasted and or observed, all anchored commercial vessel greater than 1600 gross tons shall ensure:
  - a. That a second anchor, if installed, is made ready to let go,
  - b. That their propulsion plant is placed in immediate standby,
  - c. That the vessel is not dragging anchor.
2. When wind speed (including wind gusts) exceeds 30 knots, the Captain of the Port strongly recommends that all commercial vessels greater than 1600 gross tons that are underway, not making way, shall:
  - a. Have their propulsion plant in immediate standby,
  - b. Remain greater than two nautical miles from other vessels at all times,
  - c. Remain greater than two nautical miles from traffic lanes, shoal water, and shore.
3. All commercial vessels greater than 1600 gross tons shall always have a licensed deck officer on watch and maintain a continuous radio listening watch. The radio watch must be on channel 13 VHF-FM when anchored inside the federal breakwater, and on channel 14 VHF-FM when anchored outside the federal breakwater or underway, not making way.
4. If weather, traffic density, and other conditions different from those stated above so necessitate, the Captain of the Port may order vessel to proceed underway or maintain assist tugs alongside.

For questions concerning this Marine Safety Information Bulletin, please contact Sector Los Angeles-Long Beach Command Center (310) 521-3801 or by email at [D11-SMB-SECTORLALB-SCC@uscg.mil](mailto:D11-SMB-SECTORLALB-SCC@uscg.mil)

ORE.REBECC  
Digitally signed by  
A.E.1014780  
Date: 2021.10.22  
404

R. E. ORE  
Captain, U. S. Coast Guard  
Captain of the Port, Los Angeles - Long Beach

Sources:

[www.safety4sea.com/ntsb-investigation-dragging-anchor-leads-to-ships-collision/](http://www.safety4sea.com/ntsb-investigation-dragging-anchor-leads-to-ships-collision/)

[www.australiancybersecuritymagazine.com.au/police-charge-ships-master-over-cut-telecommunications-cable/](http://www.australiancybersecuritymagazine.com.au/police-charge-ships-master-over-cut-telecommunications-cable/)

[www.latimes.com/california/story/2021-10-06/coast-guard-boards-cargo-ship-california-oil-spill-probe](http://www.latimes.com/california/story/2021-10-06/coast-guard-boards-cargo-ship-california-oil-spill-probe)

Coast Guard investigates cargo ship that was in the area of massive O.C. oil spill



Container ships and an oil platform off Huntington Beach. (Allen J. Schaben / Los Angeles Times)

# ANCHOR AWARENESS

## RECOMMENDATIONS



**Most anchor losses are preventable!**

- Know when to leave the anchorage
- Know the limitations of the anchoring equipment
- Knowledge transfer, training and mentoring of crew

Source: [www.gard.no/web/content/anchor-loss](http://www.gard.no/web/content/anchor-loss)