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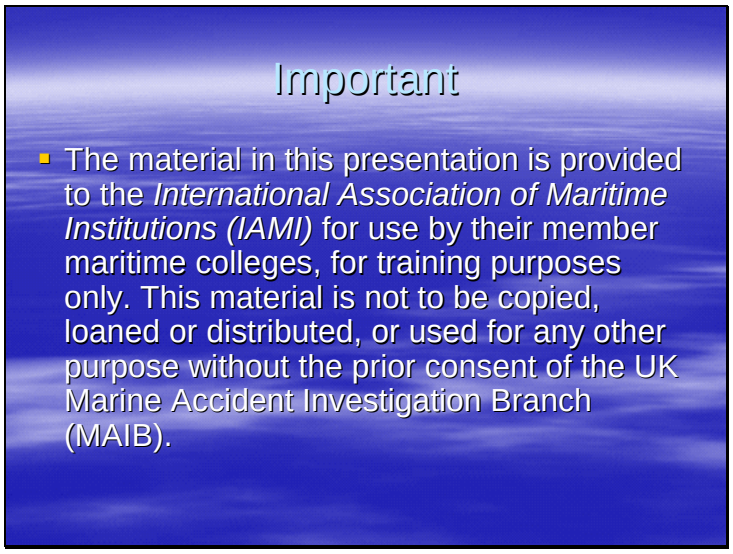
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Many MAIB cases result from the misuse of equipment.

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We will look at where misuse of equipment resulted in stability problems and the capsize of a fishing vessel.

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Capsize of a Beam trawler in the English Channel.

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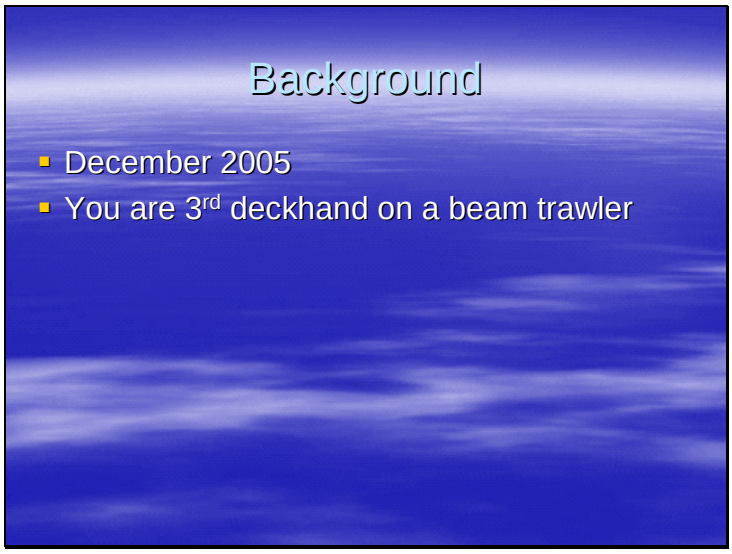

It is December 2005

You are the third deckhand on the (non-UK) fishing vessel, which is skippered by your uncle. You gained your skipper and engineer trainee certificates earlier in the year.

The fishing vessel is a beam trawler built in 1985, of steel construction with an original length of 21m and a breadth of just over 6m.

In 1998 she was lengthened by the insertion of a 2.8m mid-section to provide larger fuel tanks, and giving an overall length of 23.78m.

She is capable of beam trawling, shellfish trawling and stern trawling.

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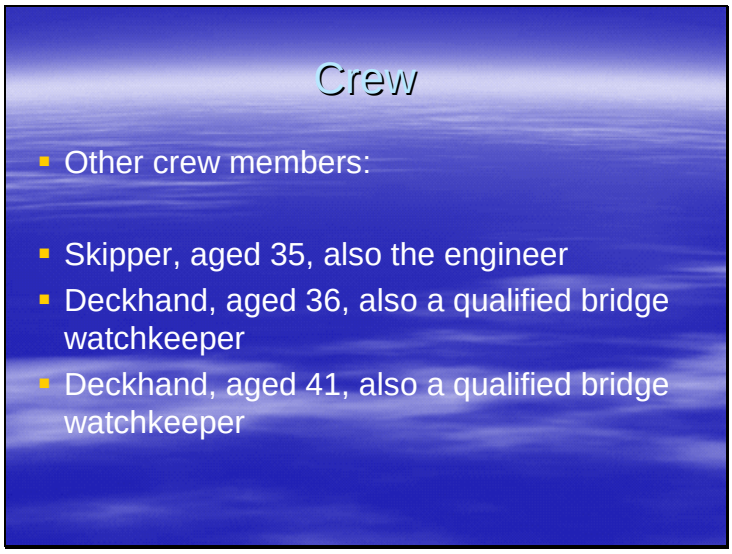

Other crew members joining you on the vessel are the skipper and two other deckhands. You are all dressed in oilskins, but without lifejackets.

Your uncle has worked on the vessel for more than 16 years. Since 1992 he has been the skipper/engineer on board. (He gained his skipper's qualification in 1993 and his engineer's certificate in 1988.)

The first deckhand has nearly 10 years experience with about 5 years on this vessel. The second deckhand also has about 10 years experience and has sailed on this vessel for almost 2 years. Both gained their certificates about 6-7 years earlier.

A crew of four is the minimum manning requirement when operating on an unlimited time at sea. On average, voyages last c. 7 days.

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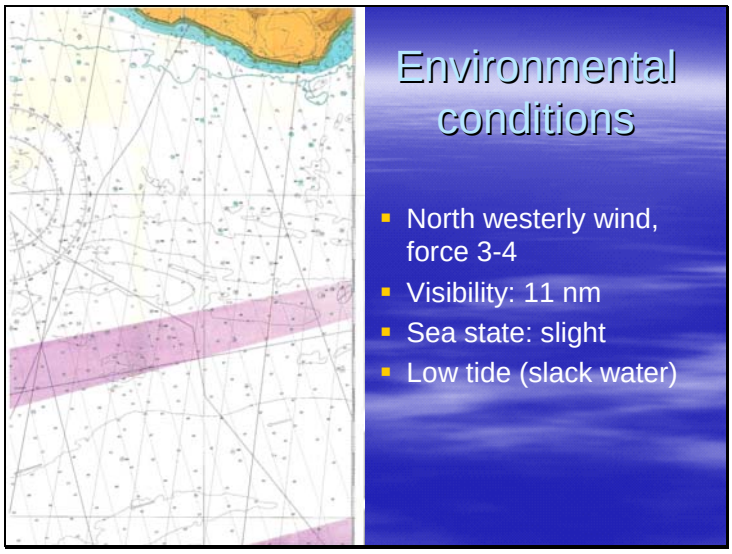

Environmental conditions:

North westerly wind, force 3-4.

Visibility 11 nm.

Sea state slight.

Low tide (slack water).

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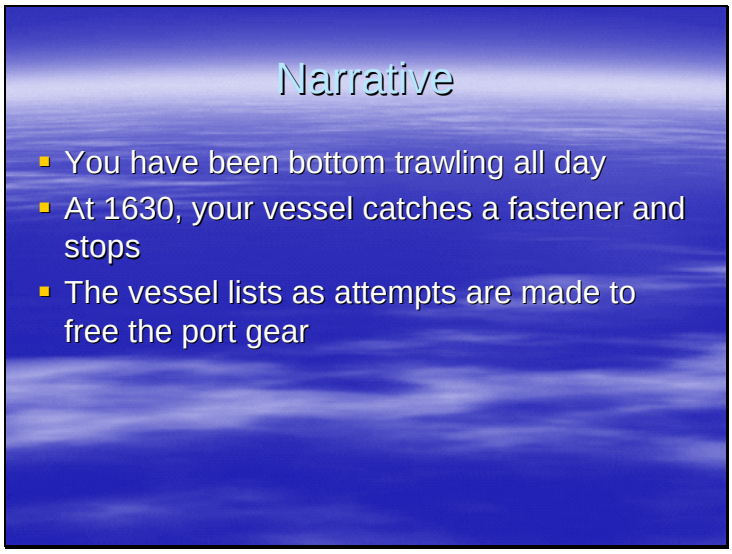

At about 1600 UTC the skipper speaks to another beam trawler and they discuss other areas they might fish the next day.

Your uncle is tired so goes for a nap while you take the helm. You continue to trawl in a southerly direction.

At 1630 the vessel catches a fastener (underwater obstruction) and comes rapidly to port, her speed dropping rapidly to zero. She has snagged her port trawl gear. The water depth is about 58m.

You go on deck with the other two deckhands, leaving watertight doors and hatches open. The skipper hauls the trawl gear on both sides of the vessel to bring the vessel over the fastener. He raises the starboard derrick up to about 65 degrees in order for the three of you to bring the cod end on board with the gilson. Heaving up the starboard gear prevents it becoming entangled with the port gear or the propeller.

The starboard derrick is then left in this raised position while you all attempt to free the port gear. As the port winch operations continue, the port list increases until water breaks over the gunwhale.

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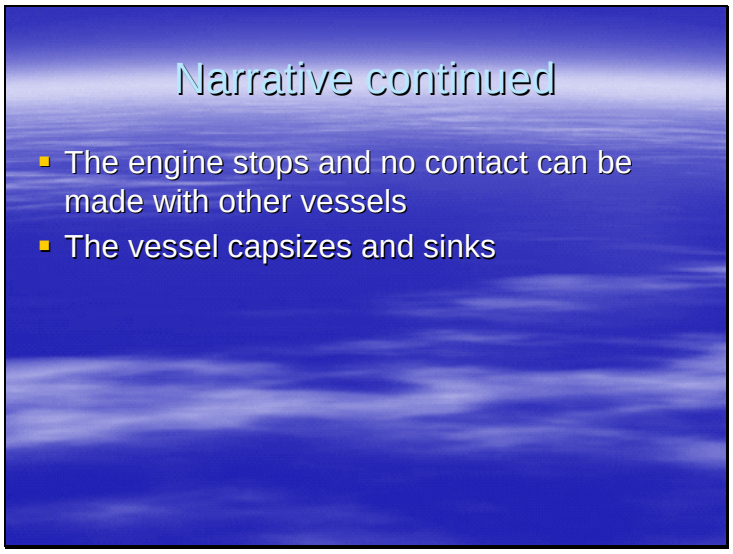

The skipper calls another fishing vessel on VHF but is unsuccessful. The engine also stops, preventing the winch from releasing the load on the derricks.

Your uncle calls out that there is nothing else he can do. Soon after, the topped starboard gear swings inboard and the vessel rapidly capsizes. The EPIRB is trapped and so cannot transmit; the life-raft is also trapped.

The following slide shows the CNIS playback of the vessel's movements up to shortly after it capsizes.

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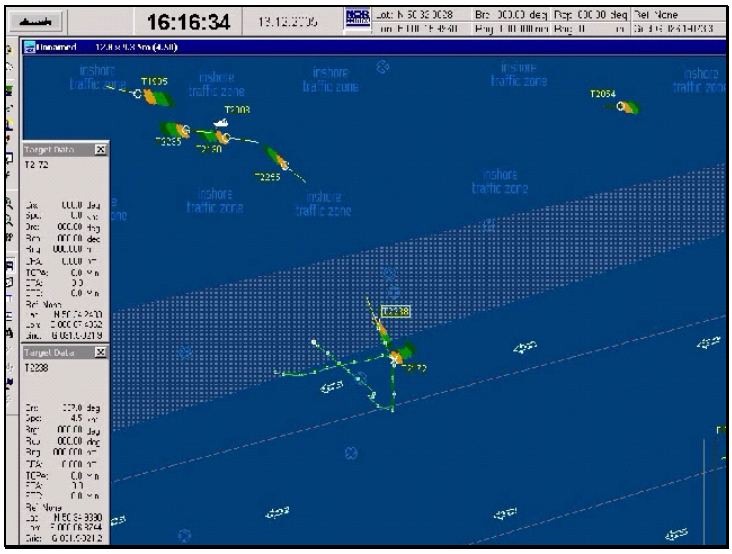

CNIS playback of accident.

Your vessel is labelled 2238 (target surrounded by a box).

Watch for the target disappearing as the vessel capsizes and the transponder is immersed.

Note:

Click on image to start replay.

Slide

You find yourself in the water and manage to climb on to the upturned hull. You see the bodies of the two deckhands float past but are unable to pull them on board. You hear knocking noises from within the hull and presume they are from the your uncle, the skipper, but there is nothing you can do. You have no way of contacting other vessels and night falls.

The following morning the hull of your vessel is seen by a passing vessel and a SAR operation is coordinated by the local Coastguard.
The bodies of the two other deckhands are recovered but your uncle's body is not.
You are the only survivor.

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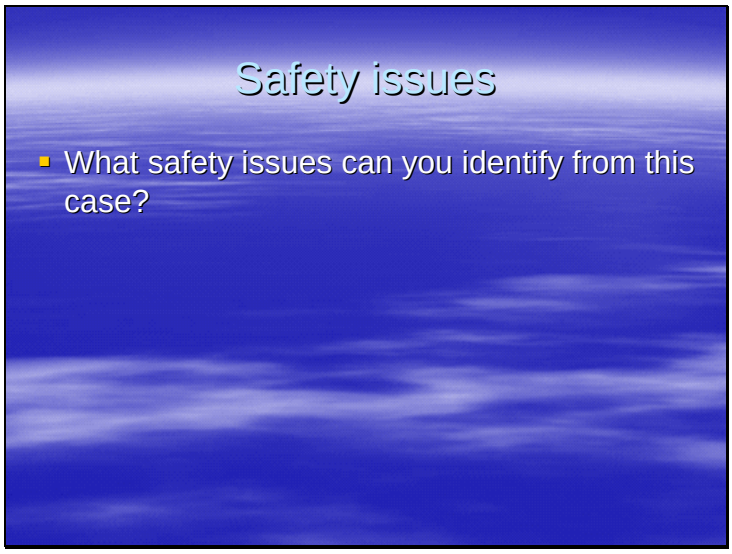
Safety issues
What safety issues can you identify from this case?

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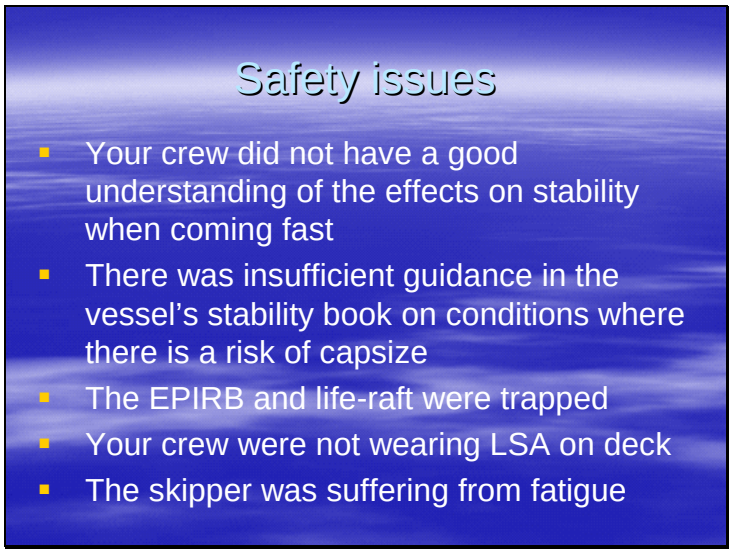

Safety issues:

Although the skipper was very experienced he appears to have made a fundamental error in the operation of a beam trawler. In raising one derrick, he put the vessel in a critical situation when he needed as much stability as possible to break free from the fastener.

This goes to the heart of basic knowledge of stability and underlines the need for specific training of crew to prevent this kind of error. Training should include topping derricks, unbalanced loads and different size trawl gear, and the effects of fatigue on decision making.

Although the vessel met all the stability requirements for various conditions of service, she, like all beam trawlers, was still vulnerable to capsize in certain circumstances. Inclusion of suitable warnings in the vessel stability book would help inform skippers of the dangers and would support any suitable training regime.

Both the EPIRB and life raft became trapped when the vessel capsized. Had either or both floated free then it is possible that other lives could have been saved. The MCA Code of Safe working Practice for 15 to 24m fishing vessels requires at least two life rafts to be carried. However, EPIRBs are just as vital, and consideration should be given to the number of them as well as their location.

The crew on the vessel were not wearing lifejackets. The importance of personal Life Saving Apparatus should be highlighted, particularly when the vessel is in a precarious situation.

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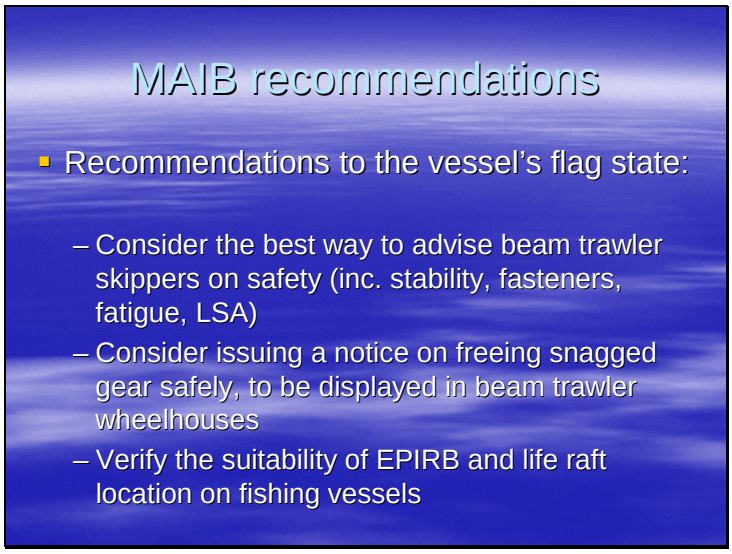

Recommendations made in the MAIB report into this incident included:

To the vessel's flag state:

To consider how best to promulgate safety advice to beam trawler skippers. Such advice should focus on vessel stability, the interrelationship between gear and stability, the dangers of fasteners, the effects of fatigue on decision-making, and the importance of personal life-saving apparatus (LSA), particularly when the vessel is in a precarious position, such as when coming fast.

To consider issuing a notice for display in the wheelhouses of beam trawlers, advising skippers of the recommended procedures to be adopted when freeing snagged gear, and the vital need to keep the forces involved balanced as far as possible.

To verify the suitability of the location and number of EPIRBs and life-rafts fitted to fishing vessels. In determining the number and/or location of such equipment, consideration should be given to the possibility that it may become entrapped, and fail to operate, in the event of vessel capsize.