Unit 4 (**under construction**)

Marine Casualties and Incidents

Marine Casualty

In accordance with the RESOLUTION A.849(20) adopted on 27 November 1997 - CODE FOR THE INVESTIGATION OF MARINE CASUALTIES AND INCIDENTS a marine casualty is an event that has resulted in any of the following:

1. the death of, or serious injury to, a person that is caused by, or in connection with, the operations of a ship; or
2. the loss of a person from a ship that is caused by, or in connection with, the operations of a ship; or
3. the loss, presumed loss or abandonment of a ship; or
4. material damage to a ship; or
5. the stranding or disabling of a ship, or the involvement of a ship in a collision; or
6. material damage being caused by, or in connection with, the operation of a ship; or
7. damage to the environment brought about by the damage of a ship or ships being caused by, or in connection with, the operations of a ship or ships.

Under the same Resolution, marine casualties are further sub-divided into the following categories (RESOLUTION A.849(20):

4.2 *Very serious casualty* means a casualty to a ship which involves the total loss of the ship, loss of life or severe pollution.

4.3 *Serious casualty* means a casualty which does not qualify as a very serious casualty and which involves:

.1 a fire, explosion, grounding, contact, heavy weather damage, ice damage, hull cracking or suspected hull defect, etc., resulting in;

.2 structural damage rendering the ship unseaworthy, such as penetration of the hull underwater, immobilization of main engines, extensive accommodation damage etc.; or

.3 pollution (regardless of quantity); and/or

.4 a breakdown necessitating towage or shore assistance.

Marine Incidents

4.4 *Marine incident* means an occurrence or event being caused by, or in connection with, the operations of a ship by which the ship or any person is imperilled, or as a result of which serious damage to the ship or structure or the environment might be caused.

Other **definitions** from the same resolution include:

4.5 ***Causes*** means actions, omissions, events, existing or pre-existing conditions or a combination thereof, which led to the casualty or incident.

4.6 ***Marine casualty or incident safety investigation*** means a process held either in public or in camera conducted for the purpose of casualty prevention which includes the gathering and analysis of information, the drawing of conclusions, including the identification of the circumstances and the determination of causes and contributing factors and, when appropriate, the making of safety recommendations.

4.7 ***Marine casualty investigator*** means a person or persons qualified and appointed to investigate a casualty, or incident, under procedures laid down in national legislation for the furtherance of **marine safety and protection of the marine environment.**

4.8 ***Serious injury*** means an injury which is sustained by a person in a casualty resulting in incapacitation for more than 72 hours commencing within seven days from the date of injury.

5 Conduct of marine casualty investigations

5.1 Where an investigation is to be conducted, the following should be taken into consideration:

1. Thorough and unbiased marine casualty investigations are the most effective way of
2. establishing the circumstances and causes of a casualty.
3. Only through co-operation between States with a substantial interest can a full analysis be made of a marine casualty.
4. Marine casualty investigations should be given the same priority as criminal or other investigations held to determine responsibility or blame.
5. Marine casualty investigators should have ready access to relevant safety information including survey records held by the flag State, the owners, and classification societies.
6. Access to information should not be barred by reason of competing investigations.
7. Effective use should be made of all recorded data, including voyage data recorders (VDR), if fitted, in the investigation of a marine casualty or marine incident wherever it occurred.
8. The State conducting the investigation should arrange for the read-out of the VDR.
9. Marine casualty investigators should be afforded access to Government surveyors, coastguard officers, vessel traffic service operators, pilots or other marine personnel of the respective States.
10. The investigation should take into account any recommendations or instruments published by IMO or ILO, in particular those relating to the human factor,and any other recommendations or instruments adopted by other relevant international organizations.
11. Reports of investigations are most effective when released to the shipping industry and public.

This section includes summaries and safety recommendations extracted from marine investigation reports on casualties involving ships and occupational accidents as produced and published by the National competent Authority, as mentioned in the source below.
The investigation report can be collected from the source, for which all contact details are given in the EMSA website under Contact points section.

Type of casualty:	Fire/Explosition
EMSA No.:	88-0514
Title:	Fire on board the Passenger ferry/ro-ro ship VICTORIA SEAWAYS in the Baltic Sea on 23 April 2013.
Summary:	The on-board fire alarm of VICTORIA SEAWAYS ship tripped on Tuesday, April 23, 2013 at 1:53 AM ship time on voyage Kiel - Klaipėda. A starboard sensor on Deck 3, between ribs 40 and 50, detected a fire. The number of tripped fire sensors rapidly increased and there was visible smoke in the view from a video camera located on the stern of Deck 3. The ship ventilation was stopped at 1:54 AM. The seaman on duty pressed the fire button and reported open fire and the necessity to activate the drencher system. The general alarm sounded on the ship. The decision was made to activate drencher sections 7 and 8 on Deck 3. At 1:56 AM a Fight Fire alarm sounded to the crew, all crew members took their stations according to the alarm schedule. The ship speed was reduced and power supply cut off to Decks 3 and 4. The fire reconnaissance team was ready to scout Deck 5 from starboard stern through the passenger corridor while the backup and sealing teams were preparing fire fighting hoses on Deck 4. The passenger service crew started evacuation of the passengers from the cabins to the points of assembly by life-saving equipment. Section 7 and 8 of the drencher system activated on Deck 3 at 2:05 AM. The reconnaissance team was given the task to check the operation of the drencher systems. The team leader confirmed that the system was operating and there is much smoke in the premises. No smoke leaks to the external decks and living quarters were detected. At 2:10 AM the reconnaissance teams found a hot spot above the seat of fire on Deck 4 and cooling of the deck started with fire fighting hoses from the stern and the head. Radio connection was established with DANISH NAVY CONTROL coast station and the station was notified that there is a fire on-board and the crew is in control. Situational updates were continuously communicated to this station. On 2:12 AM the ship completely stopped and went adrift. On 2:25 AM, to ensure fire prevention on Deck 3, two additional fire pumps were started and connected to the drencher systems, sections 9 and 10 of the drencher system were activated on Deck 3. All passengers were wearing lifejackets and waiting in the assembly areas. Radio connection was established on Channel 16 with KAUNAS SEAWAYS and this ship was asked to stay nearby for possible evacuation. On 3:00 AM section 7 and 10 of the drencher system were deactivated while section 8 and 9 remained active. The reconnaissance team reported no temperature changes on Deck 3 and 4 stern/head between ribs 0-30 and 70-200.

	The deck, being cooled around the location of the seat of fire, started to cool considerably. On 3:25 AM Deck 4 had completely cooled at the seat of fire. The reconnaissance team checked Deck 3 and confirmed there were no open flames but considerable smoke. The drencher system was deactivated and reconnaissance of Deck 3 and cooling and checks of Deck 4 were performed on a regular basis. Water from Deck 3 was successfully drained through scuppers and the lurch caused by water accumulated on starboard side gradually decreased. On 3:30 AM the company dedicated person was notified about the situation on board. On 3:45 AM sections 8 and 9 of the on-board drencher systems were reactivated on Deck 3 to ensure the fire was completely extinguished. No temperature changes observed on Deck 4. On 4:00 AM the seat of fire had been extinguished. Two observers were left at the seat of the fire, the passengers were allowed to return to their cabins. There had been on panic among the passengers. On 4:25 AM the ship resumed her voyage towards Klaipėda seaport. Reconnaissance, cooling and checking of Decks 3 and 4 were continued. On 4:45 AM a permission to go full ahead was given. The Marine Rescue Coordination Centre and the Master of Klaipėda Seaport ware notified about the accident after the ship had arrived to Klaipėda Seaport.
Safety recommendations:	We recommend to issue an order to ferry captains to appoint members of their crews responsible for checking if the batteries of all transported second-hand cars are disconnected before the ship leaves the port. 2. We recommend to install stationary carriage fire fighting guns (water or water-foam) on the company ships (ro-ro type) and connect them to the fire fighting system on cargo decks. 3. Report the state of implementation of these recommendations to the Marine Ship Accident and Investigation Manager at the Transportation Accident and Incident Investigation Department of the Ministry of Transportation within one year.
Date of the casualty:	23 April 2013
Source:	*Federal Bureau of Maritime Casualty Investigation [BSU], Germany*

This section includes summaries and safety recommendations extracted from marine investigation reports on casualties involving ships and occupational accidents as produced and published by the National competent Authority, as mentioned in the source below.

Type of casualty:	Occupational accident
EMSA No.:	109-1224
Title:	PACHUCA Mooring accident
Summary:	On 14 December 2012 at 0415 local time, the container ship PACHUCA arrived in Esbjerg, Denmark, from Larvik, Norway for discharging and loading general cargo in containers. Loading was completed at 0615 and shortly after, the ship was ready for departure. At 0620, the crew on deck started to single up to one forward spring line. There was a strong breeze from an easterly direction that made it difficult for the master to manoeuvre the ship from the berth. He therefore turned the rudder hard to port and set the thrusters to push to starboard. He then gave the main engine a short forward order by setting the pitch propeller to 40%. The master's intention was to open the ship with the forward spring and thereby obtain a distance to the berth. He would then be able to use the propulsion to move the ship into the middle of the harbour basin. Within 10-15 seconds, the spring line was slacked until there was no mooring rope left on the winch drum. The clamp, where the mooring line was fastened, broke and the line struck the bosun. The master saw the mooring line part from the ship. He tried to contact the bosun, but there was no reply. He realized that something was wrong and prepared to bring the ship alongside again. The AB reported from the forecastle that the bosun was seriously injured. After half an hour, the bosun was evacuated from the ship via a ladder from a fire truck and brought to the hospital by an ambulance.
Safety recommendations:	No safety recommendations have been issued in this safety report.
Date of the casualty:	14 December 2012
Source:	*Danish Maritime Accident Investigation board (DMAIB), [Denmark]*

Type of casualty:	Grounding/Stranding
EMSA No.:	96-0713
Title:	Grounding of the MV NORFOLK EXPRESS on 18 April 2013 on the River Weser
Summary:	In the morning of 18 April 2013, the container ship NORFOLK EXPRESS left the Stromkaje at Bremerhaven to begin her voyage to Le Havre, France. The usual tests on the main engine and steering gear carried out beforehand revealed no faults. The rudder unexpectedly remained at hard to port just a few minutes after casting off the lines. Immediate use of the tiller1 made it possible to regain control of the ship. The chief and the electrician searched extensively for the fault for several minutes, but did not find it. The steering gear suddenly returned to normal and the voyage was continued. The two individuals remained in the steering gear compartment as a precaution. The NORFOLK EXPRESS accelerated to 18 kts and proceeded down the River Weser. At 09312, the steering control failed again and the rudder remained at 7° to port. However, the tiller had no effect this time. The ship then turned to port and sailed towards the Langlütjen breakwater in a wide arc. The engine was stopped and the port anchor dropped. Despite that, the ship continued to move forward with her bulbous bow ramming against the dam and only came to a standstill there. The damage to the NORFOLK EXPRESS was so severe that she was laid up for repairs in dry dock for weeks. Fortunately, there were neither injuries nor environmental damage. Since the NORFOLK EXPRESS sails under the flag of Bermuda, a joint investigation was carried out. This concluded that a ship should not continue her voyage when an unknown fault that impairs the manoeuvrability and thus safety of the ship is evident.
Safety recommendations:	The following safety recommendations do not constitute a presumption of blame or liability in respect of type, number or sequence. 6.1 Anglo-Eastern Ship Management (vessel operator) The Federal Bureau of Maritime Casualty Investigation and the Bermuda Maritime Administration recommend jointly that the vessel operator, Anglo-Eastern Ship Management, urge its ship's commands to comply with the procedures defined by the vessel operator and the ISM Code by not taking any risks. 6.2 Anglo-Eastern Ship Management (vessel operator) The Federal Bureau of Maritime Casualty Investigation and the Bermuda Maritime Administration recommend that jointly the vessel operator, Anglo-Eastern Ship Management, train its ship's commands in the use of the emergency systems regularly. In particular, a ship's command should be aware of how to change