RESPONSES TO DRAFT REPORT 'FISHING VESSEL SINKS DUE TO FAILURE OF BILGE PUMPING SYSTEM - LESSONS LEARNED FROM THE OCCURRENCE INVOLVING THE UK-160 RIEMDA, 23 DECEMBER 2020'

No.	Party	Page	Text to be corrected	Argumentation / reasoning for your reaction	Adopted	Explanatory notes Dutch Safety Board
1	VOF Brands		At the time of the occurrence, the owner of the UK-160 Riemda announced that it did not wish to add any comments.		N/A	Duly noted.
2	Ministry of Infrastructure and Water Management	5	"EPIRB Emergency Position Indicating Radio Beacon. If (...) the vessel. "	The HRU is activated by water pressure. The functioning of the Epirb is activated by contact with seawater and not water pressure.	Yes	Text becomes: If this beacon comes into contact with seawater, it starts transmitting a signal via a satellite to the coastguard centre, indicating the position and identification number of the vessel.
3	Ministry of Infrastructure and Water Management	5	"Sump Deeper section in which the bilge pump is installed "	Collection point from which the bilge pump is able to function. In this specific case, on the processing deck, the bilge pump was installed in the sump.	Yes	"More explanation, correct description. Text becomes: Deeper section of the vessel from which the bilge pump can operate."
4	Ministry of Infrastructure and Water Management	6	It subsequently emerged (...) rope.	Are there photographs of the opened pump with pieces of rope in it?	N/A	No substantive comment on the draft report, but a question. There was an ILT inspector present when the pump in question was dismantled.
5	Ministry of Infrastructure and Water Management	9	Since it was (...) become stuck	What is meant by the words 'tension readings'? We assume it refers to the 'pulling force'.	Yes	To clarify the text, tension readings will be replaced by 'pulling force readings'.
6	Ministry of Infrastructure and Water Management	9	Since it was (...) become stuck	When was the last calibration carried out?	N/A	No substantive comment on the draft report, but a question.
7	Ministry of Infrastructure and Water Management	10		Had the pump been previously switched on for earlier work for fish processing? Is this not where the excess water came from during the washing of the deck in the stern part?	N/A	No substantive comment on the draft report, but a question.
8	Ministry of Infrastructure and Water Management	11	Fifteen minutes after (...) water	Which crew members are intended here? We assume it refers to the crew of the UK-160.	Yes	Added: of the UK-160.
9	Ministry of Infrastructure and Water Management	12	The clump (...) to the seabed	The Dutch term 'Koppelstuk' is known as a 'clump'.	Yes	Technical jargon added as footnote. Text becomes: The clump is the fishing jargon term for the weight that joins the two fishing nets.
10	Ministry of Infrastructure and Water Management	18	However, the capacity (...) the time set.	This should read: the capacity of the bilge pumps (not seawater pumps) was more than sufficient ...	Partly	Relates to seawater pumps. By way of clarification, the text now reads: The capacity of the seawater pumps.

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11	Ministry of Infrastructure and Water Management	19		The inspectorate was surprised that the bilge pump capacity on each side of the processing deck at 100 m3/hour was not sufficient to keep up with the inflow rate of 60 m3/hour calculated by the SARC. The inspector also expressed the opinion that rope was observed both in the pump and protruding from the bilge pump outlet. The question is whether the pump(s) actually worked at all? Figure 19 'The opening, the cause according to the Dutch Safety Board' The level/height of the opening would not have been reached at all, if the bilge pump had functioned correctly.	N/A	No substantive comment on the draft report, but an opinion and a question.
12	Ministry of Infrastructure and Water Management	20	Despite the presence (...) down the pump.	A shredder is intended to shred fish waste and for that reason could never cut cordage into smaller pieces. Is the cause not in fact 'good housekeeping' and keeping the processing deck clean?	No	Relates to the failing barrier, not the underlying cause. Based on interviews with several parties, the pump in question was more than capable of shredding small sections of rope.
13	Ministry of Infrastructure and Water Management	21	The bilge system (...) had been disabled.	Activation of a high water switch is a normal operating condition and therefore requires no alarm to be fitted. The failure of a bilge pump is normally not a situation that activates an alarm; and it is not a requirement.	No	The report contains an observation, and does not consider the failure to comply with regulations.
14	Ministry of Infrastructure and Water Management	22	On board (…) crew	The inspector raises the question about where this pump had been stored, since all compartments were still accessible. The draft report does not explain why the pump was beyond the reach of the crew. Was it in the wrong place, or was there some other reason why the crew was unable to reach it?	Yes	This reaction is further explained in the report (Chapter 4.6).
15	Ministry of Infrastructure and Water Management	23	On the fish processing deck (...) sound the alarm.	"There is no legal requirement for installing a bilge alarm in areas above the main deck. Additionally installed equipment is 'to the satisfaction of HSI', and should be functional (bilge sensor = bilge alarm)."	Partly	The conclusion in section 4.2.5 is an observation. This is not only limited to the legal framework. This difference is explained in chapter 4.6.
16	Ministry of Infrastructure and Water Management	23	A fish waste (...) overboard.	How high positioned are the bilge discharge valves on the processing deck in the hull? Is it not possible that this started to transfer water following the list because the non-return valve was no longer functioning due to the cordage? What other openings found themselves under water earlier than the discharge chute, and were these watertight?	No	The overboard discharge valves protruded above the discharge chute.
17	Ministry of Infrastructure and Water Management	24	The opening (...) first deck opening.	The opening of the fish waste discharge chute in the ship's hull, according to the inspectorate, represented no impairment of the watertight integrity of the vessel because - in accordance with article 2.16.2 VVB2002 - the opening was fitted with a watertight cover. This cover was also closed at a later point as described on page 11, line 4, 5, 6.	Partly	See explanatory note 15.
18	Ministry of Infrastructure and Water Management	25	The opening (...) a water-permeable panel.	This 'Ship change' was never reported to the inspectorate for assessment and approval.	Yes	Text added to report: This change was not known to the Dutch Shipping Inspectorate.
19	Ministry of Infrastructure and Water Management	26	This meant that (...) storage area	Was an attempt made to operate bilge pumps in the fish hold? This is not described in the attempts made by the crew to save the ship.	No	Description in the introduction: On arriving on the processing deck, the crew members noticed that on the starboard side, the deck was one and a half metres under water, and the starboard bilge pump was not working. Efforts to restart the bilge pump were unsuccessful.

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20	Ministry of Infrastructure and Water Management	26	Despite the watertight (...) located behind it (see figure 31).	The areas located above the main deck need not be fitted with non-return valves of this kind. Such valves are also not required by VVB 2002 article 4.11.	Yes	This reaction is further explained in the report (Chapter 4.6).
21	Ministry of Infrastructure and Water Management	27	Investigation revealed (...) impaired.	The required watertight compartmentalization for vessels of this size is restricted according to article 2.1.3 to a watertight collision bulkhead and watertight engine room bulkheads. These bulkheads reach as far as the working deck. According to the drawings submitted to the inspectorate, the working deck was the first watertight deck above the waterline.	Yes	This reaction is further explained in the report (Chapter 4.6).
22	Ministry of Infrastructure and Water Management	29	Despite the fact (...) legal requirements	'the fishing net' should be 'the vessel'.	Yes	Corrected. Text becomes: Despite the fact that the operating conditions on the vessel meant that the stability did not comply with the initial legal requirements, on the day of the occurrence, the vessel still had more than sufficient self-righting moment.
23	Ministry of Infrastructure and Water Management	29	However, in the SOLAS convention (...) in the hull.	According to the SOLAS treaty, cargo vessels need only satisfy the damage stability requirements if longer than 80 metres (SOLAS Ch II-1 reg. 4.2.1.2). In addition, the UK-160 is smaller than 500 GT and as a consequence based on its dimensions is also a non-convention vessel.	No	The conclusion in section 4.2.11 on p 29 is an observation. Due to the exceptional position of fishing vessels, they do not have to meet this requirement. Therefore the watertightness was not tested.
24	Ministry of Infrastructure and Water Management	29	Due to the exceptional position (...) not taken into account.	"See previous argumentation. Quote p6: 'The angle of list to starboard reached more than 50 degrees, the engine room air intake came under water' According to the IS code wind criterion, the maximum angle of list is 50 degrees. The angle of list of the UK-160 was 36 degrees (SARC calculations)."	Yes	Sentence connotation altered: 'was also not taken into account' becomes 'was not included in the stability calculations'.
25	Ministry of Infrastructure and Water Management	30	Due to the different (...) freeze the caught fish	What does this mean? Sentence not complete.	Yes	The word 'larger' added. Text becomes: Due to the different working methods, the vessel originally had a larger crew and large freezers were installed on board, to freeze the caught fish.
26	Ministry of Infrastructure and Water Management	30		Figure 33 shows that the waterline was below the processing deck.	Partly	See previous notes. This is explained in chapter 4.6.
27	Ministry of Infrastructure and Water Management	33	When water started (...) a critical point.	See previous argumentation.	No	The ship reached its critical point due to the list. This was an angle of list whereby water was able to enter through the air intake.
28	Ministry of Infrastructure and Water Management	34	On board (...) the watertight integrity.	See previous argumentation.	Yes	This reaction is further explained in the report (Chapter 4.6).
29	Ministry of Infrastructure and Water Management	34	The fact that (...) being undermined.	See argumentation page 29, line 26..29, and page 24 line 8..10.	Partly	The conclusion in section 4.4.3 is an observation. This is not only limited to the legal framework. The difference is explained in chapter 4.6.
30	Ministry of Infrastructure and Water Management	35	Despite the fact (...) fishing fleet.	The conclusions in the draft report may need to be revised on the basis of the previous arguments.	N/A	The conclusions are based on observations. There are not only based on legal requirements (see above). The text has been amended in order to clarify the difference.

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31	Ministry of Infrastructure and Water Management	36	The investigation (...) fish waste discharge chute.	"The Dutch Safety Board appears to assign an important role to the fish waste discharge chute, while concluding with a different conclusion. In summary: 'The opening of the fish waste discharge chute in the ship's hull represented an impairment of the watertight integrity of the vessel as it drastically reduced the distance from the waterline to the first deck opening.' (page 24, line 8-10) 'The fish waste discharge chute was only sealed closed after the vessel had adopted an angle of list of more than thirty degrees. This made it possible for unwanted seawater to flow in via the chute.' (page 25, line 7-9) But then: 'Because the angle of list continued to increase, the water started to advance steadily higher against the upright wall of the fish waste discharge chute (see figure 4). Occasionally water lapped over the edge of the discharge chute into the fish processing compartment. In an attempt to keep as much water as possible outside the vessel, at around 17.40 hours, one deckhand went below to close the hatch cover of the fish waste discharge chute' (see page 11, line 2-6) This would seem to lead to the conclusion that the chute played little or no role and in the context of the accident was not an 'impairment of the watertight integrity'. After all, in some unexplained way, the vessel had already taken on board a large volume of water, before the water entered via the chute. After 'occasionally' taking on water via the chute, it was closed, therefore re-establishing the watertight integrity, but nonetheless the list and the intake of water continued to increase, once again unexplained. It would appear that the cause of the incoming water was not halted at any point during the entire accident, as a result of which the vessel filled with water from the inside.	N/A	No substantive comment on the draft report, but an opinion.
32	Ministry of Infrastructure and Water Management	36	but in and of itself, this fact should never result in the loss of a vessel	Any vessel of these dimensions will sink as a result of progressively taking on water. Due to the limited watertight layout.	N/A	No substantive comment on the draft report, but a question.
33	Ministry of Infrastructure and Water Management	36	The investigation (...) ship's skin	What was the status of the bilge system in the engine room / fish hold when discovered, were they pumping? What was the status / condition of the valves? Was the fish hold system automatically switched to pumping? Was the possibility excluded that water entered the bilge pumping system from outside, due to the list or were only perforations in the hull considered?	N/A	No substantive comment on the draft report, but a question.
34	Ministry of Infrastructure and Water Management	37	The specific (...) waterline		No	No argumentation found.
35	Ministry of Infrastructure and Water Management	45	Fishing Vessels Decree – Article 84. Bilge system	The Fishing Vessels Decree 1989 does not apply to this vessel. The Fishing Vessels Decree 1989 covers vessels up to 24 metres.	Yes	This section will be replaced by the relevant regulations from Fishing Vessels Decree 2002 - Article 4.11 Bilge system.
36	Ministry of Infrastructure and Water Management	45	Fishing Vessels Decree – Article 91. Number and capacity of bilge pumps	The Fishing Vessels Decree 1989 does not apply to this vessel. The Fishing Vessels Decree 1989 covers vessels up to 24 metres.	Yes	This section will be replaced by the relevant regulations from the Fishing Vessels Decree 2002.

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37	Ministry of Infrastructure and Water Management	39	GT = 300 mt	GT is a volume measurement, not metric tonnes. GT determines how many barrels of wine can theoretically be carried in the vessel.	Yes	Adjusted.
38	Ministry of Infrastructure and Water Management			The inspectorate is surprised that the cause of the inflowing water was not discovered. Given the order of the events as reported in the timeline, it is probable that the pump continued to run. This should have emerged from the interviews with the parties involved.	N/A	Dutch Safety Board investigators held a large number of interviews in the course of this investigation with both parties involved and experts. In addition to an investigation of the vessel itself. This revealed that it was not possible to determine an unequivocal cause for the water intake.
39	Ministry of Infrastructure and Water Management	36	Addition on the previous review notes following the explanatory request of the DSB due to the previous review notes.	Regarding the watertight classification of the fishing vessel, the English Maritime Regulator (MCA) uses regulation that differ from those used by the Dutch regulator (ILT). There is no such deviation with regard to the classification of the stability calculations. Both the regulations of ILT and MCA are based on the Intact Stability code. Both parties have assumed the same weather and watertight classification.The approved stability book is based on all weather and watertight closable spaces, including the spaces above the work deck. With this ship, this results in a weathertight deck one deck above the working deck (highlighted green on figure 35).	Yes	Adopted.

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