PKBWM

PAŃSTWOWA KOMISJA BADANIA WYPADKÓW MORSKICH

FINAL REPORT

24/19

marine accident

Fishing cutter UST-31 and fishing cutter Ancilla WŁA-68

Collision of fishing cutters in the Baltic Sea on April 17, 2019.

March 2020

The investigation of the accident – collision of the fishing cutter UST-31 and fishing cutter Ancilla WŁA-68 was conducted on the basis of the Act of 31 August 2012 on the State Commission on Maritime Accident Investigation (i.e. Journal of Laws of 2019, item 1374) and norms, standards and recommended methods binding for the Republic of Poland agreed in as part of the International Maritime Organization (IMO).

Pursuant to the provisions of the abovementioned Act, the purpose of investigation of a marine accident or incident is to determine the circumstances and causes of its occurrence for the prevention of future marine accidents and incidents and to improve maritime safety.

The State Marine Accident Investigation Commission does not decide in its investigation on the guilt or liability of persons involved in a maritime accident or incident.

This REPORT may not constitute evidence in criminal proceedings or other proceedings aimed at establishing guilt or liability for causing the accident to which the REPORT relates (Article 40 (2) of the Act on PKBWM - State Marine Accident Investigation Commission).

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1. Facts

On April 17, 2019 at approx. 10:40 p.m the fishing cutter UST-31 collided with the fishing cutter Ancilla WŁA-68 in the Baltic Sea at a distance of approx. 16 NM to NNE from the side of Władysławowo [fig. 1]. Both units had the Polish flag.

As a result of the collision, the bow part of fishing cutter UST-31 and the aft part of fishing cutter Ancilla WŁA-68 were slightly damaged. None of the units suffered a leak in the hull and both units returned to the ports themselves. A minor hand injury was sustained by a crew member of the WŁA-68 cutter, who was taken to hospital after entering the port.

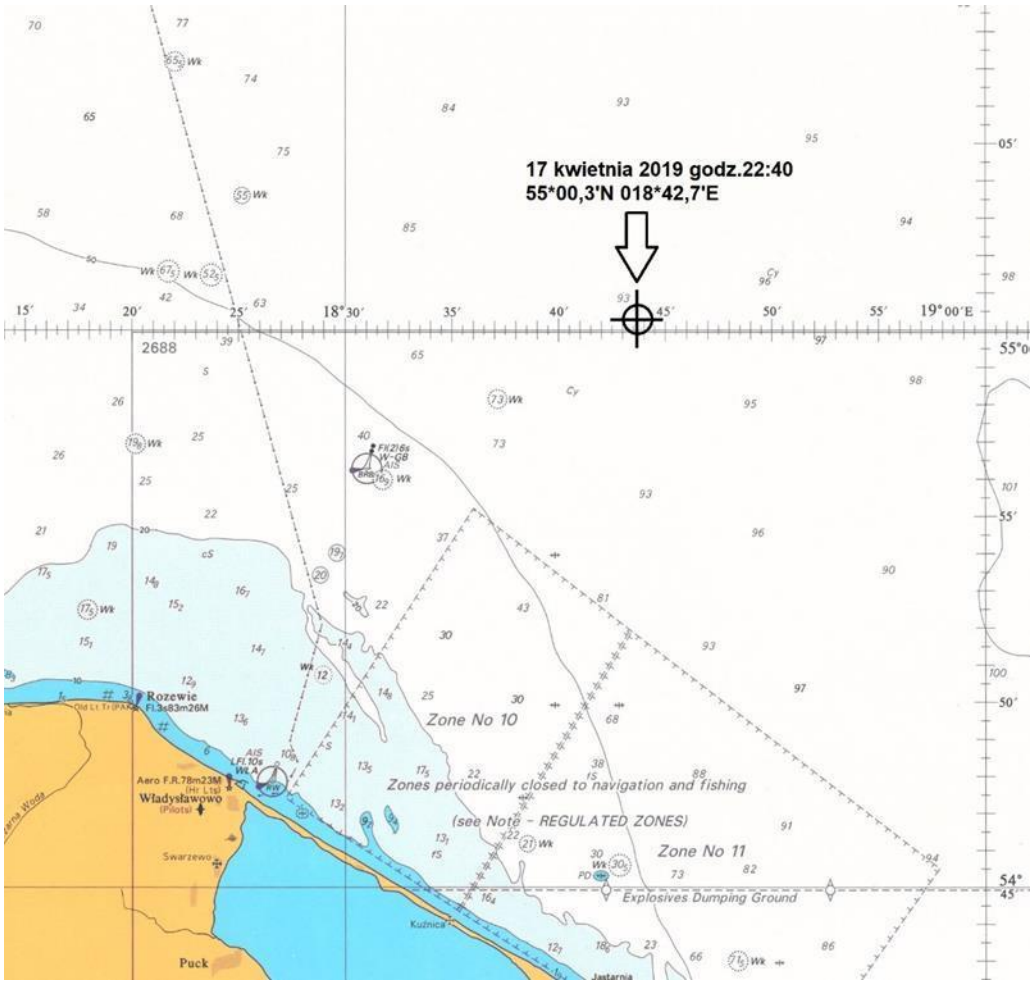


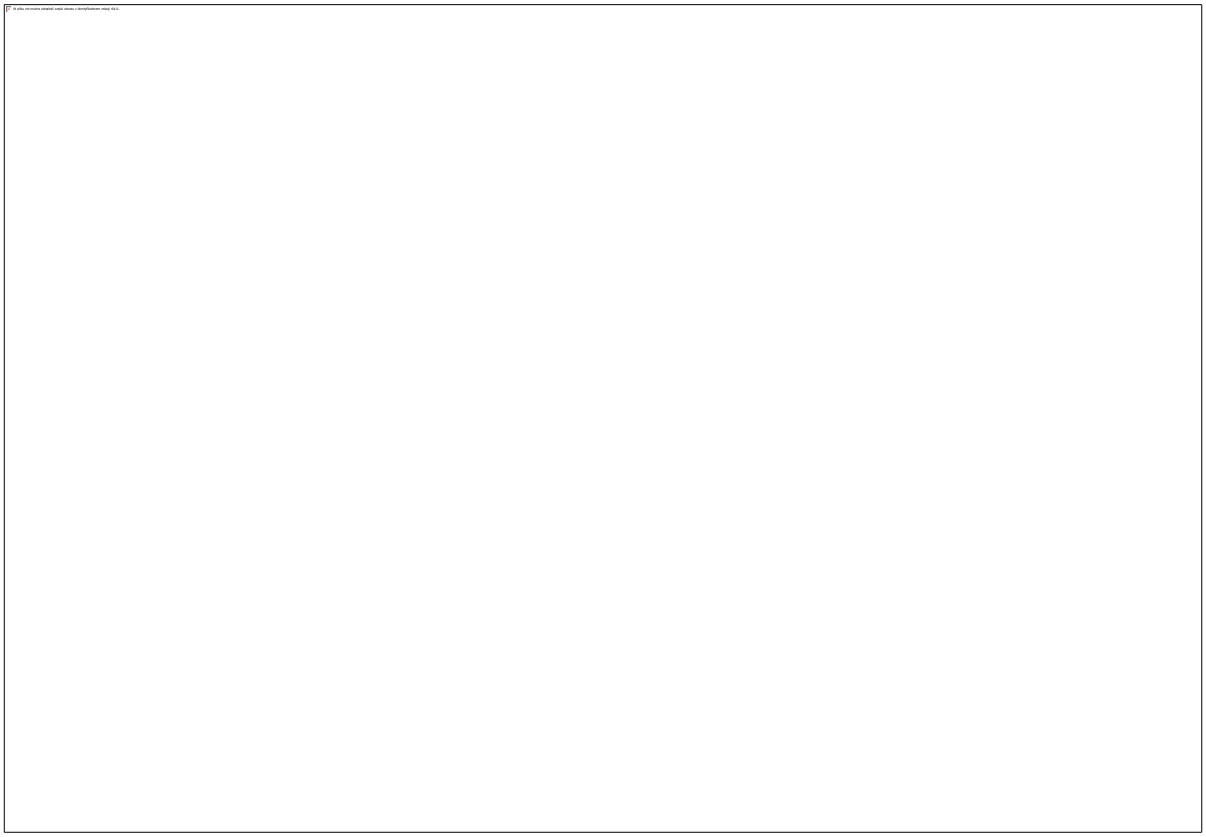
Illustration 1 Fragment of BA 2369 map. Spot of the collision UST-31 and Ancilla WŁA-68

2. General information

2.1. Unit data.

Name	ANCILLA WŁA - 68	UST - 31
Flag	Polish	Polish
Year of construction	1984	1961
Shipyard	Ronhang's Svets AB, Denmark	Szczecińska Stocznia Remontowa, Poland
Owner	Private person	Private person
Shipowner	Gadus Sp. z o. o	Private person
Classification institution	PRS	PRS
Type	Fishing cutter	Fishing cutter
Call sign	SPG3169	SPK2215
Gross capacity	73	40
Year of construction	1984/2004	1961
Machine power [kW]	201.40	221.00
Length [mm]	20.74	15.21
Width [mm]	5.50	5.20
Hull material	steel	steel
Minimum number of crew members	3	3

Photograph No. 1 Fishing cutter WŁA-68 in the port.



Photograph No. 2 Fishing cutter UST-31 in the port.

2.2. Ship travel information.

Ancilla WŁA-68, UST-31

Daily fishing.

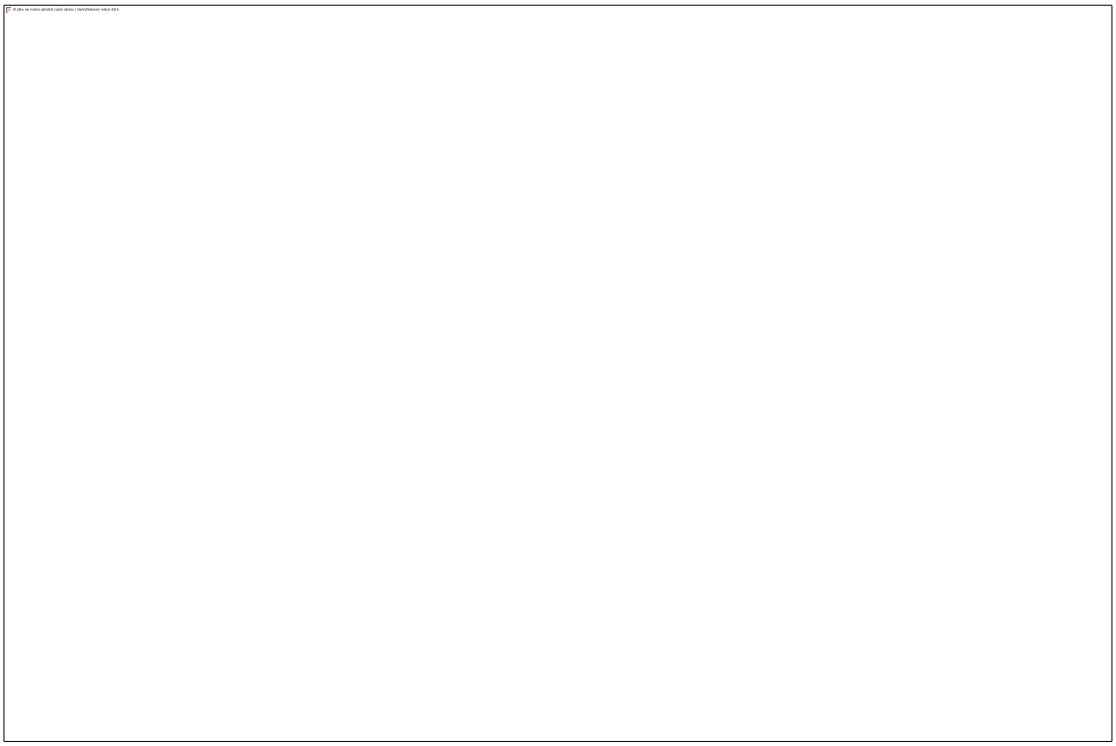
2.3. Information on a maritime accident or incident

Type:	accident
Date and time:	17 April 2019 at 10:40 p.m.
Position:	φ 55°00,3'N λ 018°42,6'E
Geographical area:	Baltic Sea
The nature of the water area:	full sea
Weather:	wind NE 4 -5 ° B, sea 1-2, good visibility
Operating status of units:	WŁA-68 anchored, UST-31 on the way
Consequences of the accident for people:	slight injury to the hand of a member of the WŁA crew - 68
Consequences of the accident for the ship:	WŁA-68 - dent of the bulwark [1] on the stern [photo 3, photo 4] UST-31 - dent of the bow [photo 5].

[1] Bulwark - extension of the ship's side extending above the upper deck.

Photograph No. 3 Damage to the fishing cutter Ancilla WŁA-68

Photograph No. 4 Damage to the fishing cutter Ancilla WŁA-68



Photograph No. 5 Damage to fishing cutter UST-31

2.4. Information on land-based entities involved and rescue operations

No rescue operations were carried out in connection with the event.

3. Description of the circumstances of the accident

On April 16, 2019, in the morning, the fishing cutter Ancilla WŁA-68, with four crew members left the port of Władysławowo to the sea. For two following days, i.e. on April 16 and 17, the cutter crew was busy fishing in a fishery located around 10-15 Mm on NNE from the side of Władysławowo. On 17 April at approx. 9:50 p.m. at position φ = 55 ° 00'N λ = 018 ° 42'E the unit was at anchor. The skipper commanding the ship turned on the anchor lights[2] and updated the status of the unit as "*at anchor* [3] " on the AIS device. At around 10:40 p.m. the watchman in the wheelhouse felt the impact on the aft part of the vessel. After leaving the wheelhouse, he saw a fishing boat UST-31 hover over his unit. As a result of this collision, a part of the bulwark on the stern of the WŁA-68 unit was slightly damaged

[2] Regulation 30 *International Regulations for Preventing Collisions at Sea, 1972.*
[3] anchored

[photo 3, photo 4] and one of the crew members suffered a wrist sprain as a result of the collision shock. Due to the fact that the technical condition of the unit did not threaten its safety, after conducting work on board at approx. 06:45 a.m. Ancilla WŁA-68 independently returned to the port in Władysławowo.

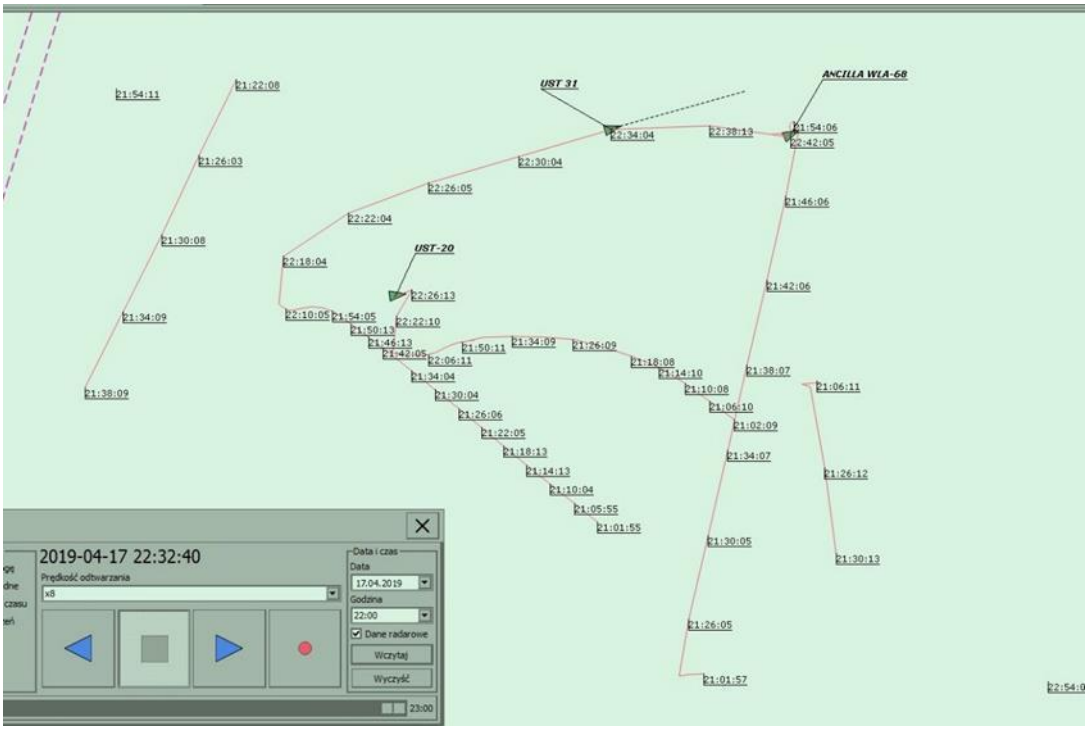


Illustration 2 Partial route of UST-31 and Ancilla WŁA-68 units on April 17, 2019

On the same day, April 17, the fishing cutter UST-31 was busy fishing from the early morning hours. The crew of the cutter consisted of four crew members[4]. At 10 p.m. the drift began to be selected. At around 10:10 p.m. the skipper of UST-31 decided to change the fishing spot and swim about 9Mm on NE [5]. Navigation was carried out using the MAXSEA application and radar, the control was carried out using the autopilot, and the engine setting was in the "full frontal" position. The crew worked on board, therefore the working lights were on. According to the information obtained from the commanding officer of UST-31, the WŁA-68 cutter was visible to him all the time and in order to avoid a collision he changed the setting on the autopilot to the right by 2 ° - 3 °. He repeated this action twice. When the situation of excessive rapprochement occurred, he decided to change the setting to

[4] According to the crew list.
[5] North-East

on the autopilot [photo 6] from automatic to manual and definitely change the course to the right. These actions did not cause the expected change of course and the UST-31 unit hit the stern of the Ancilla WŁA-68 cutter. As a result of the collision, the bow part of the UST-31 cutter was slightly damaged (photo 5) and the bulwark on the aft of the WŁA-68 cutter [photo 3, photo 4]. None of the cutters suffered a leak in the hull and none of them filled with water.

Until 04:00 a.m. UST-31 unit remained in leeway at WŁA-68. At that time, work on the processing and loading of fish into the hold was completed on the board of WŁA-68.

After pulling the anchor WŁA-68, it independently went to the port in Władysławowo where it moored at 06:45. The injured crew member was taken to the hospital in Puck, where he was diagnosed with a wrist sprain.

The UST-31 unit remained at sea and continued fishing. In the evening it entered the port of Ustka.

Photograph No. 6 Autopilot of fishing cutter UST-31

4. Analysis and comments on factors that contributed to the marine accident or incident, including test results and expertise.

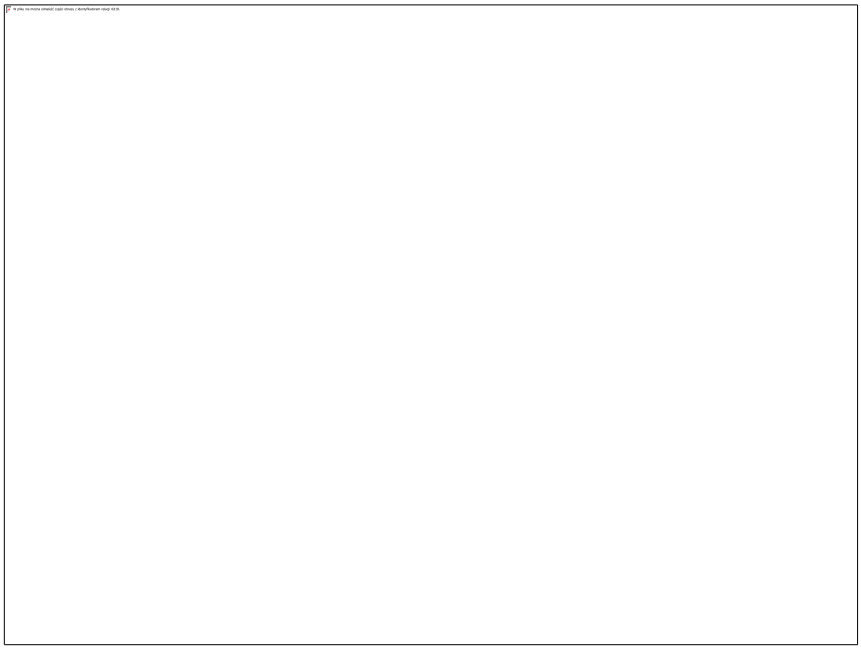
The analysis of the following factors allowed determining the causes of the collision of fishing cutter UST-31 with the cutter Ancilla WŁA-68.

4.1. Mechanical factors.

According to the opinion of the members of the Commission, tarpaulin roofing on the deck of the fishing boat UST-31 significantly reduces visibility from the place of maneuvering the boat [photo 7, photo 8]. Almost

half of the view of the lower part of the windows on the bridge is limited by the tarpaulin covering of the deck.

Photograph No. 7 View from the wheelhouse of the fishing cutter UST-31



Photograph No. 8 Fishing cutter UST-31 in the port.

4.2. Human factors

In the opinion of the members of the Commission, the watch on UST-31 was not conducted in accordance with applicable sea law. In the event of a collision risk,

the actions taken by the watch to avoid a collision were not decisive and were not taken well in advance, which consequently resulted in the collision of the cutters. Regulation 5 MPZZM provides:

Each ship shall constantly conduct proper observation, both visual and audible, as well as by all available means under existing circumstances and conditions suitable for a full assessment of the situation and risk of collision.

The effectiveness of collision prevention is highly dependent on proper observation. Statistics indicate that the lack of observation or incorrect observation is one of the most common causes of collision.

"The purpose of the observation is to provide a full assessment of the situation of the ship's own relative to the other ships and objects being observed, and in particular to assess whether a risk situation exists that creates a risk of collision" [6]. "Observation must be continuous and alert, independent of time of day or night, of good or bad weather, of being on the way or anchored" [7].

The principles of observation are also set out in the STCW Convention, which provides that: *Correct observation should be carried out at all times in accordance with regulation 5 of the International Regulations for Preventing Collisions at Sea, 1972 and should serve the following purposes:*

1. Maintaining constant alertness by visual observation and monitoring, as well as by any other available means of observation suitable to detect significant changes in the surrounding environment of the ship;

2. Full assessment of the situation and risk of collision, stranding and other dangers concerning navigation; and

3. Detection of ships and seaplanes in danger, shipwrecked persons, wrecks, floating debris and other threats to safe navigation[8]

In good visibility conditions (which was the case in the day of the event), the basic method of observation is the visual and auditory method. Visual observation means that the observer tracks the movement of units and objects on the horizon, e.g. using binoculars[7]. "The observation should be carried out from a place where the entire horizon can be seen best

[6] *Międzynarodowe prawo drogi morskiej w zarysie.* W.Rymarz. Trademar Gdynia 2015
[7] *Międzynarodowe prawo drogi morskiej*. Z.Koszewski, S.Gorazdowski Wydawnictwo Morskie 1965
[8] *Międzynarodowe przepisy o zapobieganiu zderzeniom na morzu*. H.Śniegocki Trademar Gdynia 2016

and especially the bow sector "[9]. On the fishing cutter, the person appointed to observe and control was the skipper commanding unit, who was in the wheelhouse at the time of the event [photo 7]. In addition, he had a radar at his disposal, which was an effective aid in conducting observations.

Regulation 5 - *Observation* is very closely linked to regulation 7 - *Collision risk* and regulation 8 - *Action to avoid the risk of collision*.

Regulation 7 MPZZM entitled *Risk of collision provides* that:

a. To determine if there is a risk of collision, each ship should use all available means applicable to existing circumstances and conditions. If there is any doubt as to the existence of a risk of collision, it must be assumed that it exists.

b. (…)

c. (...)

d. In determining whether there is a risk of collision, particular account shall be taken of the following:

- it shall be assumed that the risk of collision exists if the compass bearing on the approaching ship does not change clearly;

- such a risk may sometimes exist even when a clear change of the bearing is visible, especially when approaching a very large ship, towing unit, or when approaching a ship a short distance.[10]

In cases where ships encountering each other at sea approach each other, the first step to be taken is to assess whether there is a risk of collision. This assessment should be carried out as early as possible so that there is as much time as possible to make a decision and execute the maneuver in accordance with the requirements contained in the rules applicable to the situation, to effectively avoid a collision.

Observing the position of mast, side and stern lights can help determine if there is a risk of collision. On its basis, the changes in the course of the observed vessel may be determined. When during observation we see mast and side lights, whose arrangement changes and the distance between ships decreases, it should be considered that the risk of collision exists [11]. The Ancilla WŁA-68 unit, which remained at anchor, had anchor lights

[9] *Międzynarodowe prawo drogi morskiej w zarysie.* W.Rymarz. Trademar Gdynia 2015
[10] *Międzynarodowe prawo drogi morskiej w zarysie.* W.Rymarz. Trademar Gdynia 2015
[11] *Międzynarodowe przepisy o zapobieganiu zderzeniom na morzu*. H.Śniegocki Trademar Gdynia 2016

and working light on. However, on fishing cutter UST-31, in addition to the statutory lights of the ship on the road with mechanical drive, there were also visible work lights. Their task was to illuminate the space on the work deck to facilitate the work of the crew. According to the Commission, these lights, together with the limited field of view through the windows on the bridge, hindered the UST-31 commanding the cutter from conducting proper observation, resulting in an erroneous assessment of the situation, leading to excessive approach to the WŁA-68 cutter and to late and ineffective actions to avoid collision.

"Action to avoid a collision can only be effective if it is carried out in a timely manner, ie early enough"[12]. Once it is established that there is a risk of collision, action should be taken to avoid collision.

According to regulation 8 MPZZM *Action to avoid collision*:

a. (...)

b. Whenever circumstances permit, any change in course and/or speed to avoid a collision should be large enough to be easily seen by another ship

observing visually or by means of radar. Avoid successive small changes in course or speed.

c. If there is sufficient space at sea, changing course alone may be the most effective action to avoid excessive proximity, provided it is significant, timely and no other situation of excessive proximity occurs.

d. (...)

e. (...)

f. (...)[10]

According to the Commission, the action to avoid collision taken by UST-31 was not in line with Regulation 8b, as the course change was not decisive and large. The skipper was gradually changing course using the autopilot. Based on experience and practice, Regulation 8 requires that small, consecutive course changes are avoided. Such indecisive action may not be noticed in time, and additionally the use of autopilot slows down the unit's response time to a given course change.

[12] *Międzynarodowe prawo drogi morskiej w zarysie*. W.Rymarz. Trademar Gdynia 2015

4.3. Organizational factors

Working lights in front of the superstructure turned on when moving on water, had a significant impact on the quality of observation carried out by the skipper. In addition, the glow of the working lights was reflected from the white tarpaulin stretched over the left side of the deck [photo 7] and had an impact on the wrong assessment of the distance.

4.4. Impact of external factors, including those related to the marine environment, on the occurance of marine accident.

No external factors were found that affected the accident.
Visibility and weather conditions were good.

5. Description of the results of the investigation, including safety issues and conclusions of the study

After the analysis, the Commission concluded that the direct cause of the collision of fishing cutters UST-31 and Ancilla WŁA-68 on 17 April 2019 at approx. 10:40 p.m. was:

1. Moving on water with working lights on in front of the superstructure limiting the observation of other ships' movement,
2. Non-use or misuse of other technical devices (AIS, radar) to detect and assess the risk of collision with other units,
3. Uncertain maneuvers in the event of excessive approach.

Bad maritime practice, which is insufficient attention during observation and routine incompatible with MPZZM regulations, are the most common causes of collisions. The accident described is not an individual event. The issue of observation and the manner of action taken in the event of a collision risk was raised in the previous of the Polish National Commission for Contribution.[13]

6. Safety recommendations

The State Commission on the Investigation of Maritime Accidents has found it justified to address safety recommendations, which are proposals for actions that may contribute to preventing a similar accident in the future:

[13] Final REPORT PKBWM WIM 32/18, WIM 51/18, WIM 92/18

6.1. Shipowner

In the light of the investigation, the Commission considers that it is bad practice to carry out night work on board using work lights when the fishing cutter is on its way. At the same time, the commission believes that the construction of the roof above the deck [Fig. 7, Fig. 8] limits visibility and through the windows of the bridge

In this regard, the Commission recommends:

- considering the modernization of the existing main deck development to improve the scope of visibility from the cutter control site,
- development of procedures regulating the manner of conducting work on board using work lighting (work after dusk).

6.2. Maritime Office in Gdynia, Maritime Office in Szczecin

The Commission recommends during periodic inspections of fishing vessels to carry out checks on the possibility of observing from the place of management of vessels to comply with the provisions of the International Convention for the Prevention of Collisions at Sea referred to in this REPORT and local law, if applicable.

6.3. Polish Register of Shipping

The Commission recommends that whenever the ship's deck structure changes, which may introduce visibility restrictions from the place of operation, the classifier should be approved by the competent maritime administration authority prior to approval of the draft amendment.

7. List of photographs