



FINAL REPORT

06/18

Marine casualty

M/V City of Rome

Damage to the fender frame of the eastern breakwater while exiting the port of Gdańsk on the day of 29 January 2018

January 2019



The investigation of a marine casualty of m/v *City of Rome* was conducted under the State Marine Accident Investigation Commission Act of 31 August 2012 (The Journal of Laws item 1068 as amended) as well as norms, standards and recommended procedures agreed within the International Maritime Organisation (IMO) and binding the Republic of Poland.

The objective of the investigation of a marine casualty or incident under the above-mentioned Act is to ascertain its causes and circumstances to prevent future casualties and incidents and improve the state of marine safety.

The State Marine Accident Investigation Commission does not determine liability nor apportion blame to persons involved in the marine casualty or incident.

This report shall be inadmissible in any judicial or other proceedings whose purpose is to attribute blame or liability for the accident referred to in the report (Art. 40.2 of the State Marine Accident Investigation Commission Act).

State Marine Accident Investigation Commission

Plac Stefana Batorego 4, 70-207 Szczecin

Landline: +48 91 44 03 290

Mobile: +48 664 987 987

e-mail: pkbwm@mgm.gov.pl

www.pkbwm.gov.pl



1. Table of Contents	
2. Facts	3
3. General Information.....	4
3.1. Vessel's Particulars.....	4
3.2. Voyage Information.....	5
3.3. Accident Information.....	5
3.4. Shore Services and Rescue Action Information	8
4. Circumstances of the Accident	8
5. Analysis and Comments about Factors Causing the Accident with Regard to Examination Results and Expert Opinions	12
5.1. Human Factors.....	13
5.1.1. Shipmaster	13
5.1.2. Pilot	13
5.2. Influence of External Factors, Including the Marine-related Ones on the Accident.	14
5.3. Organizational Factors.....	14
6. Description of Examination Findings Including the Identification of Safety Issues and Conclusions	15
7. Safety Recommendations.....	16
7.1. Pilot Station in Gdańsk	16
7.2. Maritime Administration	16
8. List of Photographs	17
9. List of Figures	17
10. Information Sources.....	17
11. Composition of the Investigative Team	17



2. Facts

On 29 January 2018 in the port of Gdańsk, the vessel *City of Rome* at 20:12¹ finished loading operations at the WOC-II wharf. At 20:35 the vessel with a pilot on board and two tugboats attached unberthed from the wharf and started heading to the port exit.

The meteorological conditions at the time of unberthing were difficult due to strong wind with the strength of 12 - 13 m/s, gusting up to 15 m/s. After leaving the wharf, the wind increased reaching a maximum of 21 m/s.

At the time of passing the western breakwater, the tugboat towline (*Taurus*) was released and the vessel began to drift towards the eastern breakwater. In order to avoid contact of the vessel with the port infrastructure, the shipmaster and the pilot were manoeuvring with the engine and the bow thruster. These actions did not bring the desired results and the vessel drifted to the lead-in pier of the eastern breakwater, initially leaning against it with its starboard slant frame of the stern, and then with the entire starboard side. The master stopped the vessel by working with the engine astern and using the work of the tugboat on the aft towline. Until it stopped, the vessel had been moving forward and rubbing the spans of the fender frame, damaging the fenders, signalling lights, the safety railing and the support of the breakwater lead-in pier.

After re-fixing the tugboat to the bow, the vessel was pulled away from the fender's frame of the breakwater and led out to the roadstead. On the order of the master of the port of Gdańsk the vessel re-entered the port and berthed portside at the Westerplatte wharf.

As a result of the vessel's contact with the lead-in pier of the eastern breakwater, the port infrastructure was damaged and, to some extent, the starboard outer sheathing of the vessel. Damage to the vessel did not require immediate repair. After the class inspection, the ship left the port of Gdańsk.

¹ The time given in the report is a local time unless specified otherwise.



3. General Information

3.1. Vessel's Particulars

Name:	City of Rome
Flag:	Isle of Man
Owner:	Manx Car Carriers Limited (Isle of Man)
Operator:	Fairmont Shipping Canada, Canada
Classification society:	Lloyd's Register
Type:	car carrier
Call sign:	MZMS2
IMO number:	9174763
Gross tonnage:	9950
Year of built:	1999
Power:	4120 kW (B&W)
Width:	20.62 m
Length overall:	99.92 m
Draught:	5.30 m
Hull material:	steel
Minimum crew:	11 people



Photograph 1: The vessel, City of Rome, in the port of Gdańsk 30 January 2018

3.2. Voyage Information

Ports en route:	Gdańsk
Port of destination:	Emden (Germany)
Type of navigation:	international
Manning:	2 Bulgarians, 9 Croats, 1 Slovenian, 1 Ukrainian

3.3. Accident Information

Kind:	marine casualty
Date and time of the event:	29 January 2018 at 20:46
Geographical position of the event:	$\varphi = 54^{\circ}24'54'' \text{ N}$, $\lambda = 018^{\circ}39'33'' \text{ E}$
Geographical area of the event:	Gdańsk, Poland
Nature of the water region:	estuary of the river Martwa Wisła – internal waters
Weather during the event:	good visibility, wind W 7-8° B,



Operational status of the vessel during the event: under ballast
Consequences of the accident to people: no consequences for people
Consequences of the accident to the vessel: small damage to the sheathing of the starboard side over the waterline
Consequences of the accident to the infrastructure: damaged construction of the fender frame, bent back the cantilevers of the breakwater lead-in pier, broken fenders, damaged 7 signalling lights, damaged signalling railing, no lighting of the breakwater lead-in pier



Photograph 2: Traces of abrasion on the slant frame of the stern



Photograph 1: Damaged fender frame of the breakwater lead-in pier



Photograph 2: Damaged security railing



3.4. Shore Services and Rescue Action Information

Neither any shore units have been engaged nor rescue action conducted.

4. Circumstances of the Accident

On 29 January 2018 at 19:30 the *City of Rome* berthing at the WOC-II wharf started preparations for exiting the port of Gdańsk. At 19:54 testing of bridge devices was completed. At 20:10 the pilot came on board, there was an exchange of information between the master and the pilot, a plan of exit manoeuvres was prepared. The readings of the vessel's draught were taken - 4.14 m at the bow, 4.80 m at the stern.

At 20:12 cargo operations were completed and at 20:20 the loading platform was closed and secured.

At 20:27 the *Taurus* tugboat was fixed through the central hawse-hole and at 20:32 the towline was provided to the *Tytan* tugboat from the port side aft, in a manner allowed by the vessel's structure. After fixing the tugboats, the master reported that the vessel was ready to leave. At 20:35 the last mooring line was thrown and the vessel unberthed from the wharf. During the manoeuvres, the master, the pilot, the chief officer and the AB at the helm were on the bridge. In accordance with the previously agreed manoeuver plan after leaving the WOC-II wharf, the vessel was kept in the central line of the Władysława IV basin, and then after turning to port side, at ca. 20:40 it was kept as close as possible to the left side of the fairway, steering to the N-9 buoy which was on the left side of the fairway due to strong wind in the eastern direction. According to the plan, after turning once the Władysława IV basin was left and positioning the vessel towards the port exit, the master began to increase the main engine's setting so as to obtain maximum manoeuvring speed and to increase the speed of the vessel to 7 - 8 knots. At the same time the tugboat at the bow was released for its safety.

The pilot, who was concerned about the slow increase of speed, made sure by asking the master, whether the engine setting was set to the maximum manoeuvring speed.

Despite the increase of speed to 4 knots, after passing the head of the western breakwater the vessel began to drift towards the eastern breakwater passing to the eastern side of the port channel.



Photograph 5: Screenshot from the electronic chart from the vessel, City of Rome

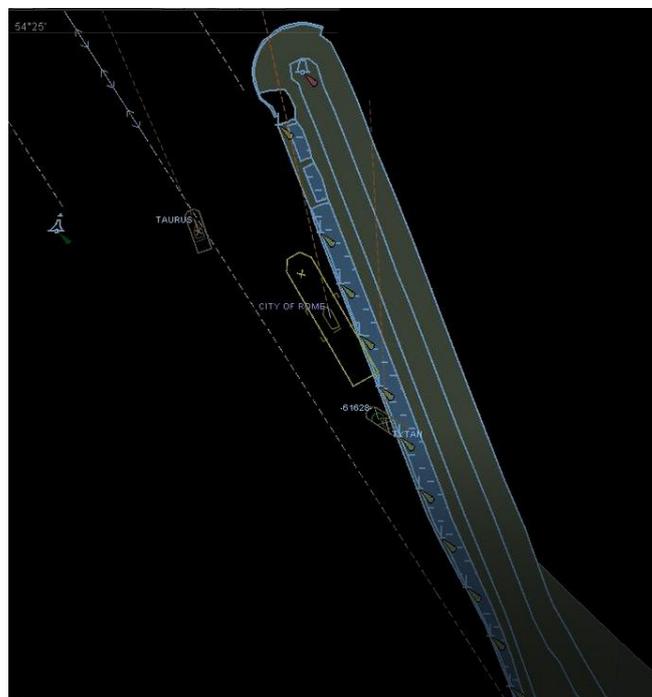


Figure 1: Screenshot of the VTS radar image (20:46:00)

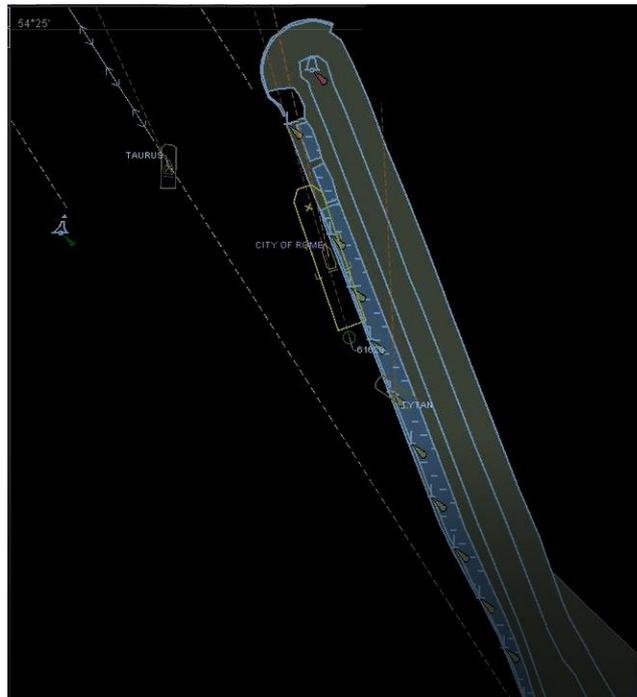


Figure 2: Screenshot of the VTS radar image (20:46:18)

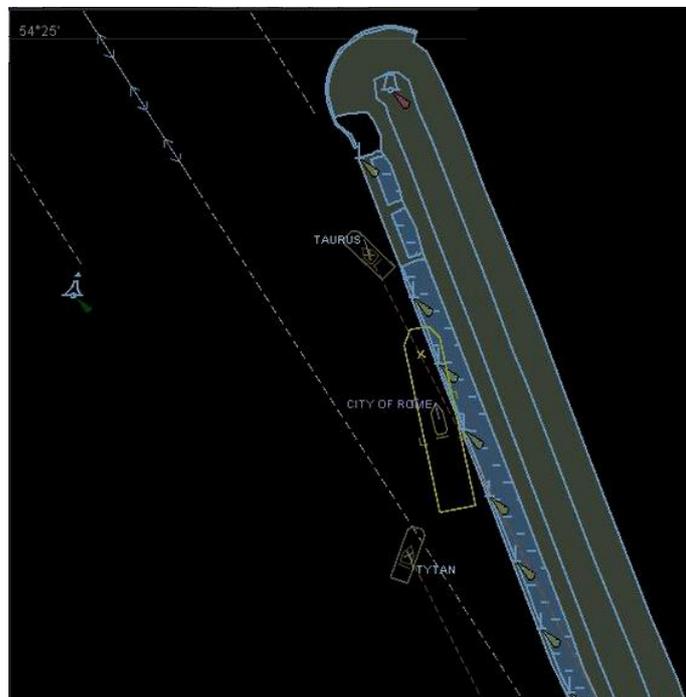


Figure 3: Screenshot of the VTS radar image (20:49:12).



In spite of manoeuvres with the thruster and helm and the assistance of the tugboat at the stern, the drifting of the vessel towards the eastern breakwater could not be stopped and at ca. 20:46 the first contact of the vessel with the fender of the breakwater occurred. Moving at the speed of about 4.3 knots the vessel brushed its stern against the fender beam damaging the dolphins, and then it began to move forward, rubbing against its steel spans.

The change of the engine settings to *full astern* and the operation of the aft tugboat caused the vessel to move backwards. Before the towline was secured at the bow, the fore part of the vessel had drifted to the fender frame of the eastern breakwater. At 20:52, the towline was reattached on *Taurus* through the bow hawse-pipe and at zero speed of the vessel, the *City of Rome* started to be pulled away from the breakwater lead-in pier in a parallel manner.

After pulling it away, the vessel assisted by tugboats and with the help of its own engine started heading towards the roadstead of the port of Gdańsk.



Photograph 6: Abrasions of the aft part of the hull – starboard.

After passing the red head of the breakwater and entering the approach fairway to the port of Gdańsk the bow tugboat was released at 21:05 and the aft tugboat at 21:07 and the vessel went to the anchorage.

The shipmaster and the pilot inspected the inside of the hull. The starboard side of the vessel was inspected: cargo space, CO2 room, thruster room and the engine room area. No internal damage to the sheathing was found.

On the same day at the request of the master of the port of Gdańsk the vessel returned to the port of Gdańsk.



Photograph 3: Abrasions of the midship – starboard.

5. Analysis and Comments about Factors Causing the Accident with Regard to Examination Results and Expert Opinions

As a result of abrasion of the hull of the *City of Rome* against the elements of the fender frame of the eastern breakwater of the port of Gdańsk the port infrastructure was damaged.

The dynamic contact of the vessel's hull with the fender frame contributed to the deflection of the support of the lead-in pier of the breakwater, damage to the safety railing and signalling lights (7 pieces). The result of the damage was the lack of lighting of the eastern lead-in pier and cracked fenders.



5.1. Human Factors

5.1.1. Shipmaster

According to the procedures of the vessel's operator, shipowner Fairmont Shipping Canada, the permissible wind force at which the entrance/exit manoeuvres of the vessel are possible is 32 knots (16.5 m/s). At the moment of unberthing the speed of the wind was about 14 m/s. In the weather forecast for the South Baltic Sea there was a warning about a storm and the wind gusting up to 18 m/s, and in the weather forecast for the port of Gdańsk there was information about the wind speed up to 16 m/s. It was practically a limit value for manoeuvring the *City of Rome*. Such value of the forecasted wind should warn the shipmaster against risky manoeuvres within the port. The master did not properly assess the impact of the strong western wind on the hull of the vessel with a large windage area and accepted the plan, which he had agreed with the pilot, of releasing the tugboat immediately after leaving the Władysława IV basin and making the turn in the turning basin directing the bow towards the exit from the port.

5.1.2. Pilot

In the opinion of the Commission, the pilot performing the pilotage of the *City of Rome* during the departure of the vessel from the Władysława IV basin made a mistake advising the master a manoeuvre consisting in releasing the tugboat too soon, i.e. in the port channel. In the opinion of the Commission, the pilot was sufficiently experienced in manoeuvring such types of vessels and it had been a wrong plan to continue the proposed manoeuvre in such a strong and gusting wind strengthening its force after turning in the turning basin.

The pilot should bear in mind that car carriers have a large windage area, and in addition, the vessel was manoeuvring without the cargo, under ballast only, which additionally reduced its manoeuvrability. Keeping the bow tugboat at least until leaving the eastern breakwater heads would protect the vessel from contact with the breakwater structure.

5.2. Influence of External Factors, Including the Marine-related Ones on the Accident

The external factor affecting the occurrence of the accident was a very strong western wind of the force of 16 m/s gusting up to 21 m/s pushing the side of the vessel. The wind caused the vessel to drift towards the eastern breakwater and at the same time prevented it from reaching the set manoeuvring parameters of the vessel. Because of the construction (very large windage area), the vessel, despite the use of the engine, the bow thruster and the work of the aft tugboat was unable to stay on the assumed course and leaned against the fender frame of the breakwater causing its damage.

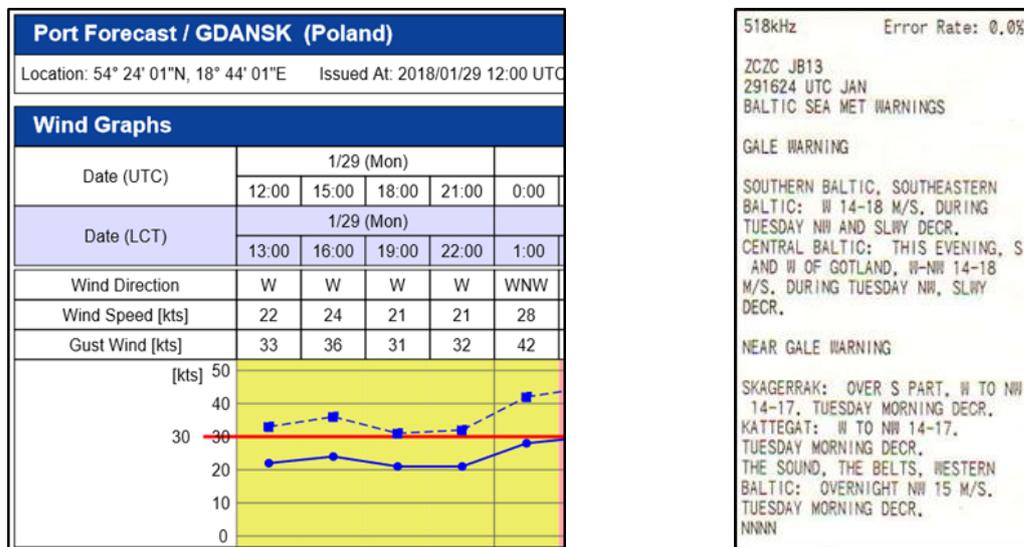


Figure 2: Weather report for the port of Gdańsk for 29 January 2018

5.3. Organizational Factors

The organizational factor, which undoubtedly had an impact on the occurrence of the accident, was a failure of the maritime administration to comply with the recommendations of the State Marine Accidents Investigation Commission. In 2014, the Commission, after examining a serious marine casualty of a vessel as a result of which the vessel and its infrastructure suffered serious damage, issued recommendations proposing changes in port regulations that would regulate the procedures for releasing tugboats when vessels with a large windage area are being lead out. Despite a positive response to the recommendations, such changes had not been introduced to the regulations.



6. Description of Examination Findings Including the Identification of Safety Issues and Conclusions

As a result of the investigation, the Commission has recognized that the main factor that caused the accident was an early release of the tugboat. When making a plan of exit manoeuvres the master with the pilot did not analyse the weather forecast accurately, and the data had been read only from the vessel's gauges at the time when it had berthed at the wharf partially covered by port structures.

Failure to take account of the prevailing weather conditions affected planned manoeuvres and the way they were effected.

In 2014 State Marine Accident Investigation Commission conducted the investigation of the *Horizon Aphrodite* casualty, which was leaving the port in Gdańsk in strong western wind and it dropped the towline from the bow tugboat when passing the head of the western breakwater.² In result of such a decision the vessel drifted to the eastern side of the fairway, and then to the lead-in pier of the breakwater causing its significant damage, and then to the cap of the breakwater head causing damage to the vessel's hull.

After the investigation, the Commission recommended the maritime administration “*to add to the order introducing port regulations (Part II, Chapter I Additional Provisions for the Port of Gdańsk) a provision regulating the release of tugboats from assisting the vessels with large windage area when leading them out of the port channel not before taking them to the roadstead depending on existing weather conditions.*” This recommendation has not yet been carried out despite its being accepted.

A similar recommendation was addressed to the pilot station. In response, the Commission received confirmation that all pilots were familiar with the Commission's recommendation, which was confirmed by the signature of each pilot.

The pilot performing the pilot service on the *City of Rome* has already performed such service twice on other car carriers. Previously, as part of pilot practices, he had assisted experienced pilots 28 times during taking in and leading out car carriers to and from the Władysława IV basin under various weather conditions. The manner in which he planned the departure

² Final Report WIM 29/13 *m/t Horizon Aphrodite*, May0 2014



manoeuvre of the *City of Rome* was in a sense a standard way of leading out this type of vessels from that place used by pilots who were training him. Releasing the towline from the tugboat immediately after leaving the Władysława IV basin and after making a turn towards the exit in the turning basin finds its explanation in the desire to ensure safety of the tugboat in the moment when the vessel was quickly increasing its speed. None of the experienced fellow pilots informed the practicing candidate for a pilot that this type of manoeuvre has its limitations and is possible only in good weather conditions. The pilot instructing their future fellow pilots should pay attention to all aspects related to safe manoeuvring of vessels in order to protect port infrastructure.

7. Safety Recommendations

The State Marine Accident Investigation Commission has found it justified to refer safety recommendations, which are proposals for actions that may contribute to the prevention of similar accidents in the future, to the following entities.

7.1. Pilot Station in Gdańsk

The Commission has recommended that all pilots should recall the contents of the final report of *Horizon Aphrodite* and become acquainted with the final report of the *City of Rome*.

At the same time, the Commission repeats the recommendation contained in the *Horizon Aphrodite* final report – “*The Commission has recommended that pilots should use tugboats and advise the captains to use their assistance until the vessel is pulled away to the roadstead – behind the head of the eastern breakwater to the water region with safe depths (for a given draught of a vessel), taking into account weather conditions during the pilotage and manoeuvrability of a vessel.*”

In addition, the Commission has drawn attention to the avoidance of unnecessary haste during manoeuvres and negative routine behaviour which causes that not all factors affecting safety of manoeuvres are taken into consideration.

7.2. Maritime Administration

The Commission has recommended the director of the Maritime Office in Gdynia to include in the current order of the Maritime Office in Gdynia - Port Regulations, a rule regulating the



release of tugboats during unberthing of vessels with a large windage area from the port channel only after the vessel has been moved to the roadstead depending on the existing weather conditions.

8. List of Photographs

<i>Photograph 1: The vessel, City of Rome, in the port of Gdańsk 30 January 2018.....</i>	<i>5</i>
<i>Photograph 2: Traces of abrasion on the slant frame of the stern</i>	<i>6</i>
<i>Photograph 4: Damaged fender frame of the breakwater lead-in pier</i>	<i>7</i>
<i>Photograph 5: Damaged security railing</i>	<i>7</i>
<i>Photograph 5: Screenshot from the electronic chart from the vessel, City of Rome.</i>	<i>9</i>
<i>Photograph 6: Abrasions of the aft part of the hull – starboard.</i>	<i>11</i>
<i>Photograph 6: Abrasions of the midship – starboard.....</i>	<i>12</i>

9. List of Figures

<i>Figure 3: Screenshot of the VTS radar image (20:46:00)</i>	<i>9</i>
<i>Figure 2: Screenshot of the VTS radar image (20:46:18)</i>	<i>10</i>
<i>Figure 3: Screenshot of the VTS radar image (20:49:12).</i>	<i>10</i>
<i>Figure 4: Weather report for the port of Gdańsk for 29 January 2018.....</i>	<i>14</i>

10. Information Sources

Notification about the accident.

Deposition of the witness.

Materials from the VTS station.

11. Composition of the Investigative Team

The team conducting the examination was composed of:

the team leader: Monika Hapanionek – the member of the SMAIC,

the team member: Marek Szymankiewicz – the Secretary of the SMAIC.