Transporta nelaimes gadījumu un incidentu izmeklēšanas birojs

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MARINE SAFETY INVESTIGATION REPORT Nr.1-2021

Safety investigation into the Grounding of CEG ORBIT at Isle of Man on AUGUST 26th, 2021

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FOREWORD

The purpose of this investigation is to improve maritime safety and to prevent pollution from ships, and similar marine casualties and incidents in the future.

This report shall in no case create a presumption of liability or blame and has not been written, in terms of content and style, with the intention of it being used in legal proceedings.

The findings of the safety investigation are not binding on any party and the conclusions reached and recommendations made shall in no case create a presumption of liability (criminal and/or civil) or blame. It should be therefore noted that the content of this safety investigation report does not constitute legal advice in any way and should not be construed as such.

Contents

Summary

CEG Orbit is a Latvian registered, 64.2m LOA, 1260t DWT single hold general cargo vessel having a crew compliment of two Navigating officers, one Engineering officer and two ordinary seamen.

The vessel departed Gladstone Dock Liverpool at 16:20hrs on 25th August bound for Belfast, loaded to her maximum draught of 3.45m with 1150mt of wheat grain.

Whilst on voyage and proceeding at approximately 10kts she ran aground on the East coast of the Isle of Man near Cranstal at position 054.23,52N 004.21,70W at 01.15hrs UTC (02.15 British Summer Time - BST).

Conditions were calm and clear with minimal marine traffic in the area and visibility was good with a 72% waning moon.

Narrative of events

All following times are BST (UTC +1)

25th August 2021

Vessel loaded 1150mt of wheat grain at Gladstone Dock Liverpool United Kingdom, bound for discharge in Belfast Northern Ireland.

Prior to departure a voyage plan with key information was prepared and signed by all three officers.

At 16.20hrs she departed without a pilot and was navigated through the River Mersey by the vessels Chief Officer under the supervision of The Master.

At 18:00hrs and according to the posted watch schedule, the watch was handed over to the Master until 24:00hrs, by reason of good weather, good visibility and working Bridge Navigational Watch Alarm System (BNWAS)

together with a short voyage length, the Master decided the vessel could be solely navigated by the officers without any additional lookouts on the bridge.

26th August 2021

At 00.00hrs, the Master was relieved by the Chief Officer and after handing over the watch/appraising the Chief Officer of the navigational situation, he retired to his cabin to rest. The Engineer Officer was also on the bridge at midnight to ask the time of approach to Belfast before retiring to his cabin to rest.

At about 02.00hrs the Chief Officer felt a sharp pain in his intestines and he had an urgent need to leave the bridge to go to the toilet located one deck below.

At 02.15hrs the vessel ran aground on the East Coast of The Isle of Man near Cranstal at position 054.23,52N 004.21,70W when the “spring tide” was near its maximum 9.0m height.

The Engineer Officer who had been resting in his cabin was awoken by the hull vibrations caused by the grounding, assuming engine or gearbox problems the engineer ran to the engine-room to investigate.

He didn’t find anything obvious but noted that the main engine had slowed down so he went to the bridge to find out what had happened.

The Chief Officer ordered the Engineer Officer to wake up the Master which he did immediately. Together with the Master the Engineer Officer returned to the bridge to see the vessel was aground and remembered the time at around 02.20hrs.

The “spring tide” maximum height on 26th August was 9.4metres at 02.22hrs, therefore would be slack (very little associated current) and the vessel ran aground at the worst possible time to try and re-float off the sloping sand and rock beach.

In the early morning of 26th August (time not indicated) both Ordinary Seamen were woken by the Chief Officer and they saw that the vessel was aground.

At 06:00hrs the local authorities and owners were notified of the grounding and that there were no injuries appeared to be no pollution.

At 11:00hrs the author attended the vessel on the rising tide to do a preliminary hull inspection in order to check for leaks and/or breaches of the hull. It was possible to see under the vessel due to how the vessel was sat on the sand and no leaks and or breaches of the hull were detected. It was also observed that all three of her anchors were stowed.

As the next high tide approached (14:26hrs) and because the bubbler ballast level indicator system wasn’t working and there were no sounding pipes to take manual soundings, the vessel checked ballast tank condition by drawing

ballast suction from each tank in succession, all indications were that the hull had not been breached.

At 14:47hrs the first attempt to re-float the vessel took place at high tide (8.8m), a local tug the Wendy Ann attempted to assist removing the vessel however this attempt failed.

27th August

A second attempt was made at high tide (9.1m/02:42hrs) with the assistance of two tugs (Wendy Ann and the CT Vector from Liverpool), this was a success and the vessel was afloat again by 03.00hrs.

After testing the engines and steering gear the CEG Orbit made way under her own power to Douglas harbour where further inspection by Harbour Authority divers, a surveyor from Bureau Veritas (the vessels class society) and the author took place to determine that her condition was safe to proceed to sea.

Dive inspection revealed minor propeller damage on two blades, a localised deformation of the starboard aft bilge keel, scraping and a few indentations from rocks to the bottom but no hull breaches or cracked welds, the presence of undisturbed hard marine growth on the rudder would indicate it did not contact anything solid.

In addition to the underwater and accessible internal hull inspection, the main engine, steering, fire pump and BNWAS were tested under the supervision of the author and in the presence of the BV surveyor.

This work was completed by 19.30hrs 27th August and the vessel was declared safe to put to sea, with a condition of class applied to have the vessels internal structure examined following discharge of her cargo in Belfast.

Douglas Harbour Authority were advised accordingly, however the vessel remained in Douglas harbour until 08.00hrs on 29th August before continuing her voyage to Belfast where she was due to discharge her cargo.

A Bureau Veritas surveyor was not available for internal structure inspection in Belfast so the condition of class has been extended to her next port (Swansea) where inspection will occur prior to loading taking place.

Comments and Analysis

- Loading of the vessel to her deepest load draft in Liverpool was uneventful
- Departure Liverpool without a pilot and initial passage was uneventful

- Posted watch-keeping schedules were observed from 18:00 with the master taking 18:00 – 24:00 and the Chief Officer the 00:00 – 06:00 watch were followed.

- The engineer observed UMS watch-keeping 08:00~12:00, 13:00~ 17:00 on duty and 17:00~08:00 resting but on call.

- Conditions were calm and clear with 73% waning moon (fairly bright), because there was little traffic in the area and the bridge watch-keeper alarm system was working the Master decided that a second watchkeeper was not required on the bridge.

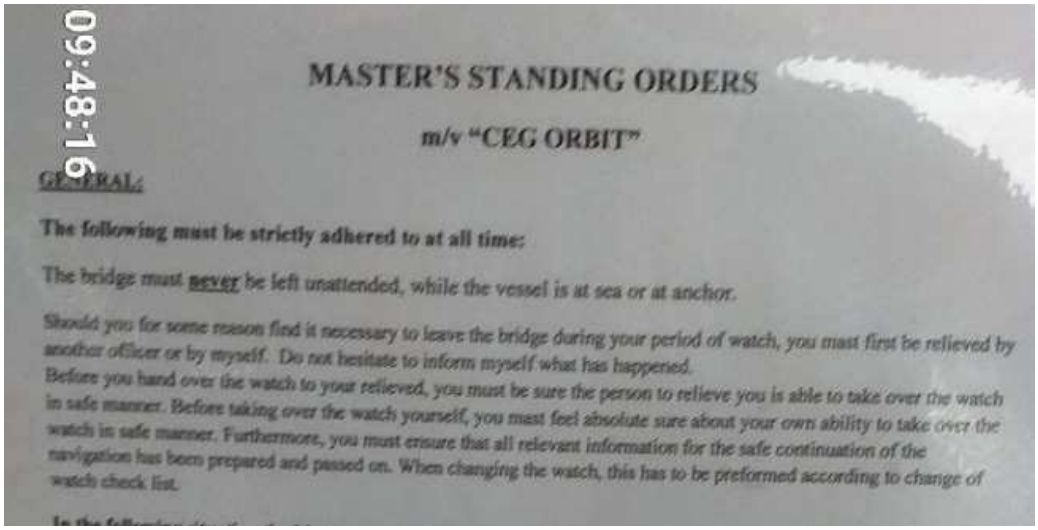
- The two ordinary seamen observe watch-keeping hours with either the Master or Chief Officer as required and at the time of the incident were in their cabins resting.

- A planned course change from bearing 327.1 to 352.2 is shown on the voyage plan and is marked on the chart and should be known to all three officers (since they took responsibility by signing the voyage plan).

- A position marked on the chart at 02:00hrs put the vessel to the right of her intended track.

- The Chief Officer - due to sudden intestinal pain, left the bridge completely unattended to go to the toilet one deck below the bridge at some time between 02:00 when the chart was marked and 02:15 when the vessel was running aground and the BNWAS declared as sounding.

Extract from the Master's standing orders with a clear statement that the bridge must **never** be left unattended and should it be necessary to leave the bridge during watch you must first be relieved by another Officer or by the Master himself.



09:48:16

MASTER'S STANDING ORDERS

m/v "CEG ORBIT"

GENERAL:

The following must be strictly adhered to at all time:

The bridge must never be left unattended, while the vessel is at sea or at anchor.

Should you for some reason find it necessary to leave the bridge during your period of watch, you must first be relieved by another officer or by myself. Do not hesitate to inform myself what has happened.
Before you hand over the watch to your relieved, you must be sure the person to relieve you is able to take over the watch in safe manner. Before taking over the watch yourself, you must feel absolute sure about your own ability to take over the watch in safe manner. Furthermore, you must ensure that all relevant information for the safe continuation of the navigation has been prepared and passed on. When changing the watch, this has to be preformed according to change of watch check list.

- Extract from the Company Safety Management System which indicates Masters standing orders have to be followed and actions as considered necessary to avoid any risk have to be taken by the Navigating Officer

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Navigational Officers / Officers of the watch (OOW) are in response to navigate the vessel during their watches according to the good seamanship and as master´s representative (safe navigation). They have to follow the standing orders of the master and have to follow the instructions of the night order book. In any case the OOW has to take actions, as considered necessary to avoid any risk. The master has to be informed at any time in case of a risk, any hazardous situation or any other circumstances, which impair the safety of the ship, its crew and the cargo. The OOW must be familiar with bridge equipment and has to ensure prior leaving the port that the equipment is in good working condition.

- The Master or the Engineer Officer, were not called to the bridge whilst the Chief Officer went to the toilet.

- The vessel's heading was not changed to the new course prior to the Chief Officer going to the toilet, which would have taken CEG Orbit away from a collision course with the shore.

- Due to the clear conditions, moonlight and proximity it would be expected the shoreline was visible to night adjusted eyesight.

- On the vessel's track and at the chart position indicated at 02:00hrs The Point of Ayre lighthouse would have been clearly visible.

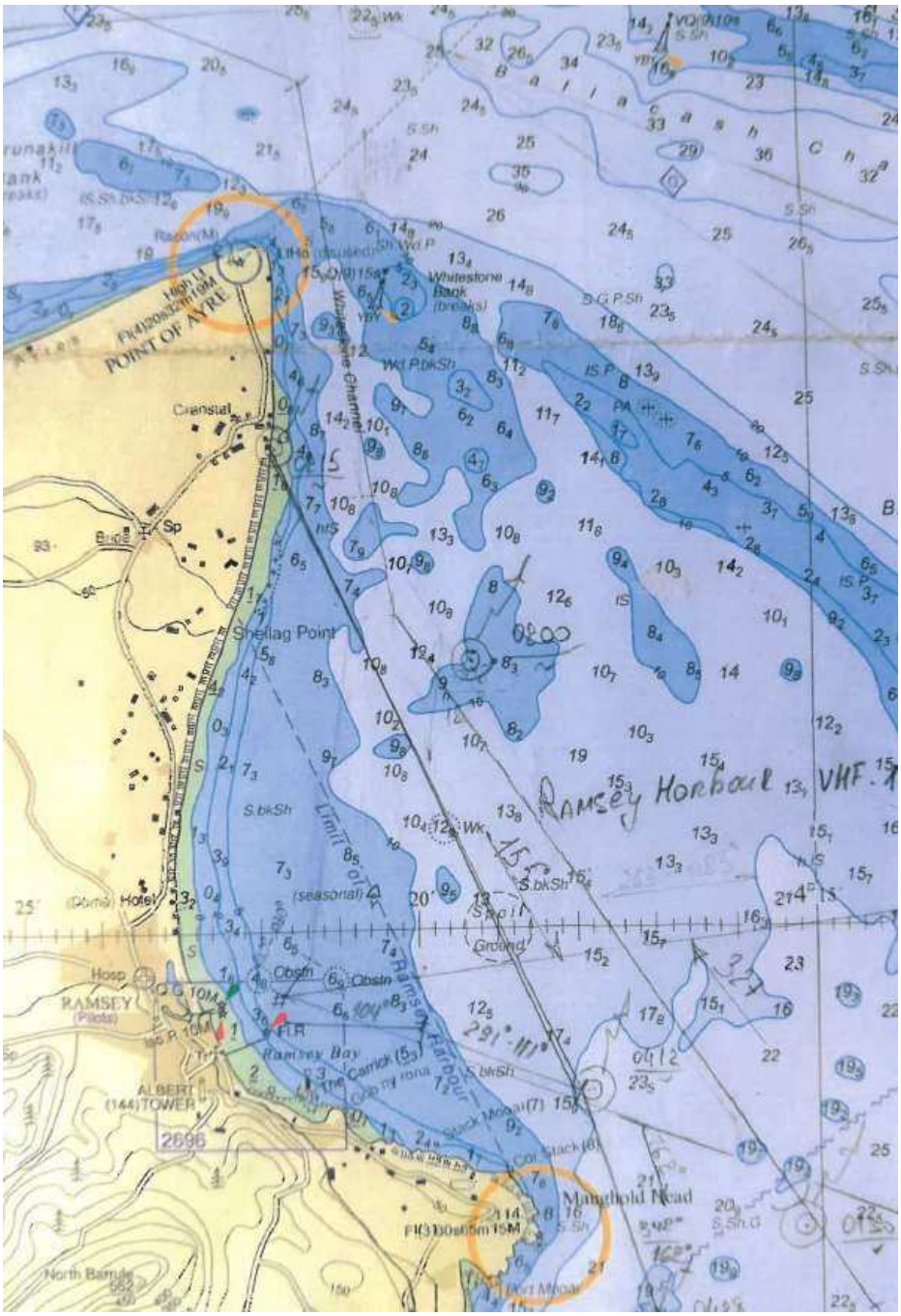
Approximately halfway through her intended voyage, the vessel grounded in a position following the 327.1 bearing since the intended course alteration was not made.

- The vessel was proceeding at a speed of approximately 10knts at the time.
- The bridge was completely unattended immediately prior to the incident.
- Voyage Plan extract (intended course change highlighted)

THE ROUTE

WP	Name	Lat	Lon	Distance	Course	Total Dist
0	Berth Liverpool	53° 27.512' N	003° 01.227' W	XXXX	XXXX	XXXX
1		53° 27.484' N	003° 01.390' W	0.10 nm	253.6 °	0.10 nm
2		53° 27.386' N	003° 01.284' W	0.12 nm	146.9 °	0.22 nm
3		53° 27.254' N	003° 01.155' W	0.15 nm	149.9 °	0.37 nm
4		53° 26.963' N	003° 01.045' W	0.30 nm	167.3 °	0.67 nm
5		53° 26.920' N	003° 01.048' W	0.04 nm	182.0 °	0.71 nm
6		53° 26.890' N	003° 01.310' W	0.16 nm	259.1 °	0.87 nm
7		53° 27.245' N	003° 01.994' W	0.54 nm	311.0 °	1.42 nm
8		53° 29.220' N	003° 04.962' W	2.66 nm	318.1 °	4.07 nm
9		53° 29.889' N	003° 05.397' W	0.72 nm	338.8 °	4.79 nm
10	Crosby	53° 30.516' N	003° 05.856' W	0.69 nm	336.4 °	5.48 nm
11		53° 30.974' N	003° 06.278' W	0.52 nm	331.2 °	6.00 nm
12		53° 31.404' N	003° 07.123' W	0.66 nm	310.5 °	6.66 nm
13		53° 31.670' N	003° 08.020' W	0.60 nm	296.5 °	7.26 nm
14		53° 31.824' N	003° 08.938' W	0.57 nm	285.7 °	7.83 nm
15		53° 31.768' N	003° 10.152' W	0.73 nm	265.5 °	8.56 nm
16	Fomby	53° 31.186' N	003° 13.663' W	2.18 nm	254.5 °	10.73 nm
17		53° 31.346' N	003° 15.045' W	0.84 nm	281.0 °	11.57 nm
18		53° 32.488' N	003° 20.054' W	3.20 nm	290.9 °	14.77 nm
19		53° 33.276' N	003° 30.032' W	6.00 nm	277.6 °	20.78 nm
20		54° 17.203' N	004° 14.726' W	51.32 nm	329.0 °	72.10 nm
21		54° 22.257' N	004° 20.329' W	6.03 nm	327.1 °	78.13 nm
22		54° 26.256' N	004° 21.266' W	4.04 nm	352.2 °	82.18 nm
23	Mew Island	54° 43.608' N	005° 30.769' W	44.02 nm	293.3 °	126.20 nm
24	Fairway buoy	54° 42.703' N	005° 42.720' W	6.99 nm	262.6 °	133.19 nm
25		54° 41.733' N	005° 46.251' W	2.27 nm	244.6 °	135.45 nm
26	N 3-4	54° 40.970' N	005° 48.350' W	1.44 nm	237.9 °	136.89 nm
27		54° 40.330' N	005° 49.800' W	1.06 nm	232.7 °	137.95 nm
28	`	54° 37.600' N	005° 53.310' W	3.41 nm	216.7 °	141.36 nm
29		54° 37.349' N	005° 53.651' W	0.32 nm	218.2 °	141.68 nm
30	Berth Belfast	54° 37.260' N	005° 53.925' W	0.18 nm	240.7 °	141.86 nm

Chart extract showing the vessels position at 02:00hrs BST.



- The engineer was woken by the vibration of the vessel running aground.

- The Master had to be woken by the engineer under instruction from the Chief Officer.

- The two Ordinary Seamen were woken up in the early morning (actual time not established) by the Chief Officer advising the vessel was aground.

- None of the vessel's three anchors were deployed (indicating there was little warning of imminent danger).

On the first rising tide following the grounding no apparent pollution or hull breach indications were observed.

- If a breach had occurred, the rate and degree of any flooding would not be possible to determine because the bubbler system (a system which determines depth of a liquid in a tank by measuring differential pressure across two sampling points) was inoperative.

- On the first high tide – initial attempts to re-float the vessel using one tug (Wendy Ann) were unsuccessful.

- Between tides the Harbour Authority engaged a groundwork company to dig around the hull to provide maximum clearance to get the vessel afloat since if the second attempt was unsuccessful the progressively falling tide would mean she stayed until the next spring tides.

- On the second attempt using two tugs (Wendy Ann and CT Victor) the vessel was freed and re-floated.

- Following engine, steering and communication channel tests the vessel made her way under her own power and berthed at Douglas.

- Following the grounding and when the vessel was alongside in Douglas the BNWAS was tested and observed by both the undersigned and BV surveyor to be functioning normally, if left unanswered it sounds a loud and distinctive alarm in both the Master's and the Chief Officer's cabins.

- The BNWAS is manually turned on and off and can be set for various alarm periods in 3m increments from 3m to 15m

- The BNWAS sounds in both the Master's and Chief Officers cabin's if left unanswered, yet the Master had to be called to the bridge by the Engineer under instructions from the Chief Officer

- The timeout period was not changed to the minimum period such that if nature "took longer than expected" The Master would be called to the bridge by the BNWAS anyway.

- As far as could be visually examined under loaded conditions (internal hull access was not possible due to loaded cargo covering the manhole access points), the hull was observed externally and machinery and safety equipment was tested and found to be safe enough to allow the vessel to put to sea.

- After resting up and following permission to proceed being obtained from both Douglas Harbour control and Belfast harbour control, the vessel continued her voyage to Northern Ireland to discharge her cargo without further issues.

Conclusions

A planned course alteration was not made at the correct time due to the bridge being unattended within the period leading up to the grounding.

The Chief Officer failed to follow a direct instruction from the Master by not calling him to the bridge to be temporarily relieved from his key function of safely navigating the vessel.

The vessel grounded since it continued to follow its previous heading - which was on a collision course with the Isle of Man.

Recommendations

The Company Safety Management System instructions and Masters standing orders are very clear, they MUST be followed at all times to ensure the safety of the crew, the vessel and the environment.

The Company should perform a root cause analysis of the incident including but not limited to establishing from the crew why company procedures were not followed, why the bridge was left unmanned and take appropriate actions.

The company should circulate the incident to their fleet to raise awareness about a situation that simply should not have happened.

Revise Company's Procedure adding explicit requirement to avoid sole watchkeeping during dark time (presence of a Lookout).

Bureau recommends to execute awareness-raising activities amongst crew (and fleet) in order to emphasize the proper use of BNWAS, as defined by Ref. D Section "Bridge Navigation Watch Alarm System".

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