



Bundesstelle für Seeunfalluntersuchung
Federal Bureau of Maritime Casualty Investigation

Interim Investigation Report 600/22

Serious Marine Casualty

Grounding of the PARANA on the Ems on 9 December 2022

8 December 2023

Pursuant to the second sentence of Article 28(1) of the Law to improve safety of shipping by investigating marine casualties and other incidents (Maritime Safety Investigation Law – SUG) in conjunction with the second sentence of Article 14(2) of Directive 2009/18/EC of the European Parliament and of the Council of 23 April 2009 establishing the fundamental principles governing the investigation of accidents in the maritime transport sector, the Federal Bureau of Maritime Casualty Investigation publishes an interim investigation report within a period of 12 months of a very serious or serious marine casualty if it is not possible to complete the corresponding investigation report within that period.

This interim investigation report should not be used in court proceedings or proceedings of the Maritime Board. Reference is made to Article 34(4) SUG.

The German text shall prevail in the interpretation of this interim investigation report.

Issued by:
Bundesstelle für Seeunfalluntersuchung (BSU)
Federal Bureau of Marine Casualty Investigation
Bernhard-Nocht-Str. 78
20359 Hamburg
Germany



Director: Ulf Kaspera
Tel.: +49 40 3190 8300
posteingang@bsu-bund.de

Fax: +49 40 3190 8340
www.bsu-bund.de

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1 FACTUAL INFORMATION

1.1 Photograph of the ship



Figure 1: PARANA¹

1.2 Ship's particulars

Name of ship:	PARANA
Type of ship:	Car carrier
Flag:	Germany
Port of registry:	Rostock
IMO number:	9427964
Call sign:	DHDT2
Owner:	PARANA GmbH & Co KG
Shipping company:	Reederei F. Laeisz GmbH
Year built:	2012
Shipyard:	Yangfan Group Co. Ltd. (China)
Classification society:	Det Norske Veritas
Length overall:	182.80 m
Breadth overall:	31.50 m
Draught (max):	9.10 m
Gross tonnage:	47,053
Deadweight:	12,868 t
Engine rating:	14,220 kW
Main engine:	Hyundai MAN/B&W 955MC-C7
(Service) speed:	20 kn
Hull material:	Steel
Hull construction:	Double bottom
Minimum safe manning:	15

¹ Source: Hasenpusch Photo-Productions.

1.3 Voyage particulars

Port of departure:	Emden/Germany
Port of call:	Dublin/Ireland
Type of voyage:	Merchant shipping/international
Cargo information:	Vehicles
Manning:	23
Draught at time of accident:	$d_f = 8.70 \text{ m}$, $d_a = 8.70 \text{ m}$
Pilot on board:	Yes
Number of passengers:	None

1.4 Marine casualty information

Type of marine casualty:	Serious Marine Casualty, grounding
Date / time:	9 December 2022, 2356 ²
Location:	Ems, north of Buoy 48 / Knock 2
Latitude / Longitude:	$\phi = 53^\circ 20.38'N$, $\lambda = 006^\circ 59.92'E$
Voyage segment:	Pilotage waters
Place on board:	Bottom
Consequences:	Grounding outside the fairway

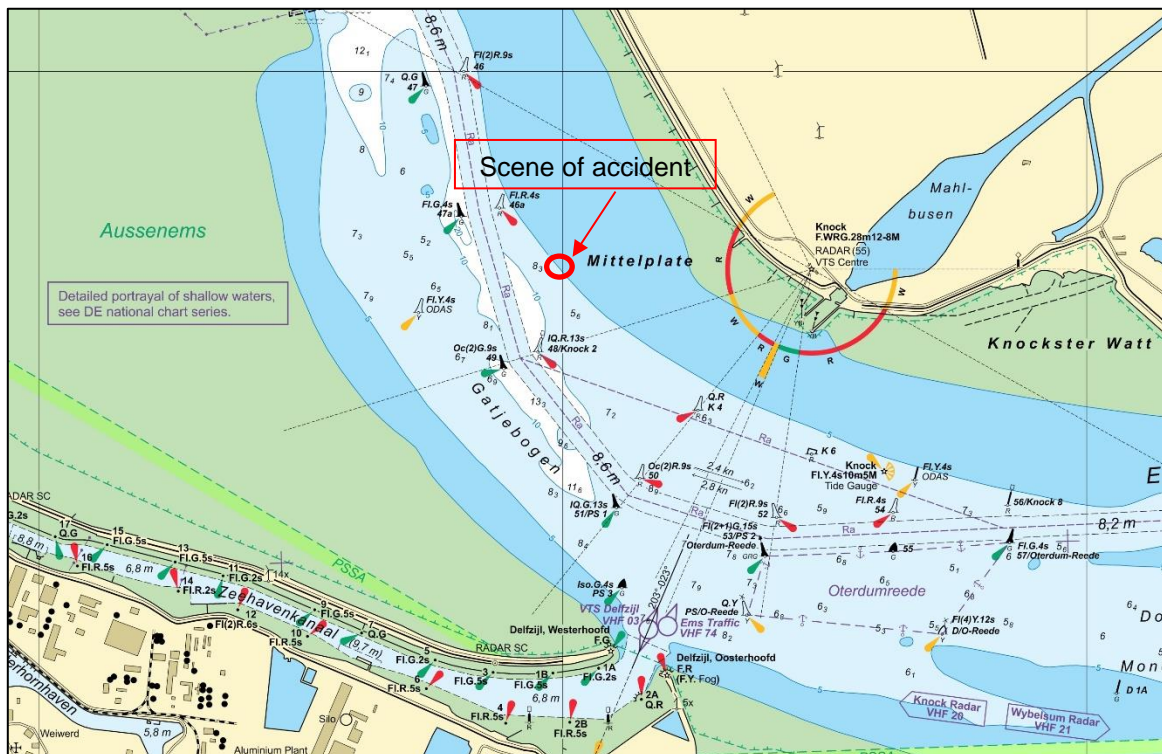


Figure 2: Sea chart with accident location³

² Unless otherwise stated, all times are in Central European Time (CET) = UTC + 1 h.

³ Source: Detail of nautical chart DE 91, Federal Maritime and Hydrographic Agency.

1.5 Shore authority involvement and emergency response

Agencies involved: Vessel Traffic Service (VTS) Emden, waterway police station Wilhelmshaven

Resources used: Towed free by the tugs RADBOD and PETER WESSELS at the ship's request.

Actions taken: Return of the ship to the berth in Emden.

2 SUMMARY

The German-flagged car carrier PARANA was en route from Emden/Germany to Dublin/Ireland with a cargo of cars on 9 December 2022. The ship cast off at 2306 with the assistance of two tugs. The master was in charge of the bridge watch. He was initially advised by a harbour pilot. At 2315, the harbour pilot handed over to the river pilot, who had come on board together with the harbour pilot. The harbour pilot left the ship at 2320 via a pilot boat. As the consequent events unfolded, the bridge was manned by the chief officer, the third nautical officer, a trainee as lookout, and a helmsman, in addition to the master and the pilot. The chief officer left the bridge at 2352. The entries in the bridge log show that the third nautical officer was responsible for determining the ship's position as from 2318 at the latest.

The ship ran at an average speed of approx. 12 knots⁴ during the voyage on the Ems. The tidal current was running against. High tide at the reference point Knock was at 0120 on 10 December 2022. At the time of the accident, there was a southerly wind of approx. 2-3 Bft. Visibility was around 3 km and the air temperature was -2 °C.

After passing the Emden fairway, three course changes to starboard were necessary to follow the course of the river Ems. The rudder commands were given to the helmsman by the pilot. During the course alteration at buoys 48/49, the ship's turn to starboard was to be countered by a counter rudder of 10° to port. The helmsman repeated the pilot's command, but put the rudder to starboard instead. This was also the case for the subsequent commands "port twenty" and "hard to port". These increasing rudder angles to starboard further increased the turning speed. When the ship's command and the pilot realised the reason for this, it was no longer possible to change course in time to avoid running aground on the five-metre depth contour, even though the rudder was put to "hard to port" and the main engine ordered to "full astern".

The passage of the oncoming ISAR HIGHWAY on the Ems was not affected by the PARANA. Figure 3 provides a rough overview of the encounter between the PARANA and ISAR HIGHWAY in the fairway of the Ems at 235329. At this point, the PARANA had buoy 48 / Knock 2 directly ahead. The distance between the vessels was about 0.75 nm.

⁴ Speed over ground.

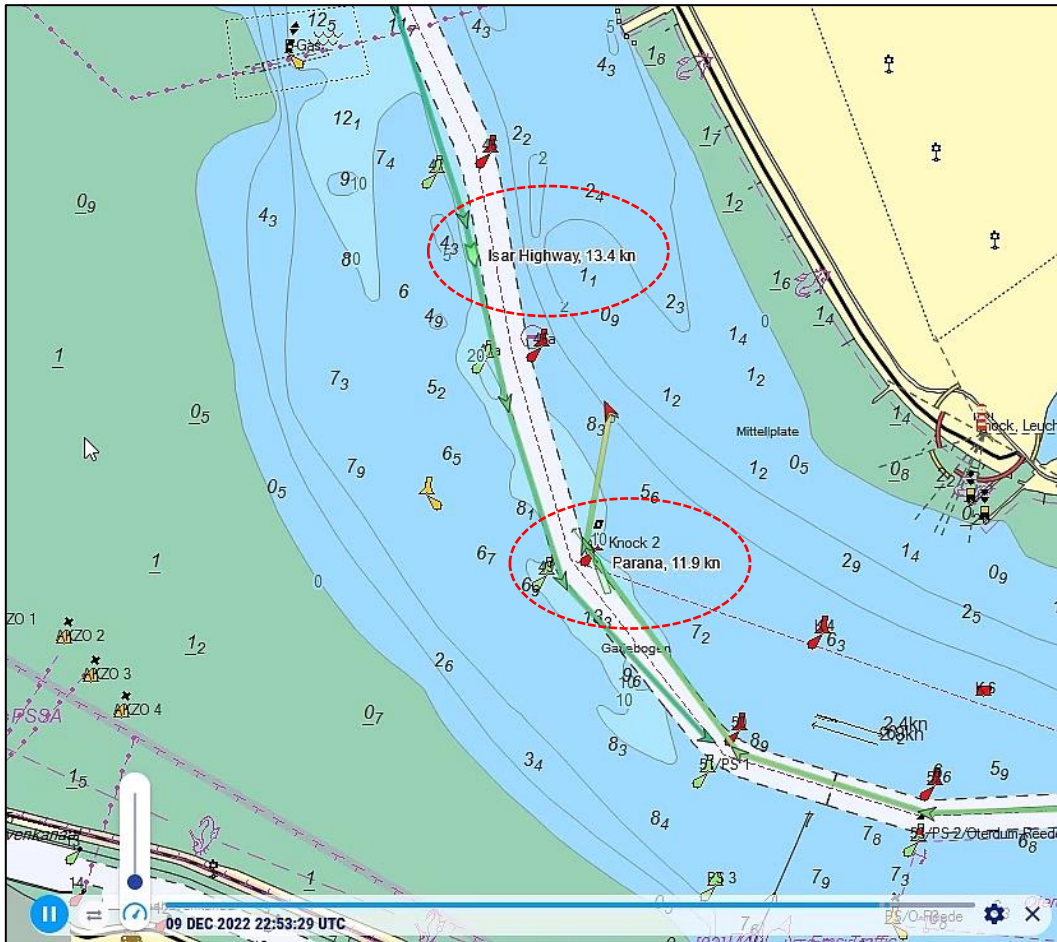


Figure 3: Screenshot at 23:53:29⁵

At 2359, after the ship had grounded, the pilot informed VTS Emden about the situation.

The crew then began to inspect the ship. No water ingress or other damage were detected. No operating fluids were leaking. Neither rudder nor propeller had any recognisable functional limitations after the grounding.

The ship was to be towed free with the assistance of two tugs. The tugs PETER WESSELS and RADBOD were deployed for this purpose. The RADBOD was the second tug to reach the scene at 0111 on 10 December 2022. The towing operations were supported by emptying various ballast water tanks. The ship was refloated at 0130 on 10 December 2022 and was back in the fairway at 0140. It then returned to Emden under its own power, accompanied by the two tugs. Officers from the Wilhelmshaven waterway police station and later an investigator from the Federal Bureau of Maritime Casualty Investigation boarded the vessel here. During this visit, the crew made a copy of the recordings of the voyage data recorder available to the investigators.

⁵ Source: MarineTraffic.

After confirmation of seaworthiness by the classification society, the PARANA left the harbour of Emden for sea at midday high water on the same day.

The investigation into the accident has since been completed and the BSU is currently in the process of compiling the investigation report. Because the one-year deadline for publication, set by the European Union and adopted as national law by the Federal Republic of Germany, cannot be met, the public is informed about the status of the investigations into this serious marine accident by means of the publication of an interim investigation report.