



Bundesstelle für Seeunfalluntersuchung
Federal Bureau of Maritime Casualty Investigation
Federal Higher Authority subordinated to the Ministry of Transport,
Building and Urban Development

Summary

Investigation Report 325/11

Serious Marine Casualty

**Grounding of the
Traditional sailing vessel AMPHITRITE
in the Little Belt
on 29 June 2011 at 2335**

15 April 2012

The investigation was conducted in conformity with the law to improve safety of shipping by investigating marine casualties and other incidents (Maritime Safety Investigation Law - SUG) of 16 June 2002 in the version applicable prior to 30 November 2011.

According to said act, the sole objective of this investigation is to prevent future accidents and malfunctions. This investigation does not serve to ascertain fault, liability or claims.

This report should not be used in court proceedings or proceedings of the Maritime Board. Reference is made to art. 19 para. 4 SUG.

The German text shall prevail in the interpretation of this Investigation Report.

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

Head: Jörg Kaufmann
Phone: +49 40 31908300
posteingang-bsu@bsh.de

Fax: +49 40 31908340
www.bsu-bund.de

Table of Contents

1	SUMMARY	5
2	SHIP PARTICULARS.....	6
2.1	Photo	6
2.2	Particulars	6
2.3	Voyage particulars.....	7
2.4	Marine casualty or incident information	7
3	COURSE OF THE ACCIDENT AND INVESTIGATION	9
3.1	Course of the accident according to witness statements.....	9
3.2	Investigation	10
3.2.1	Technical evidence.....	10
3.2.2	Weather report	10
3.2.3	Qualification.....	10
3.2.4	Voyage planning.....	10
3.2.5	Object of the association	11
4	CONCLUSION	12
5	SOURCES	13

Table of Figures

Figure 1: Photo of the AMPHITRITE	6
Figure 2: Nautical chart showing the scene of the accident.....	7
Figure 3: Scene of the accident in detail.....	8

1 Summary

The AMPHITRITE was on a southerly course on one of her training voyages through the Little Belt. There were 25 people on board. During the evening of 29 June 2011, the wind veered from a hitherto southwesterly direction to west. Therefore, the master decided to use the very narrow passage between the islands of Årø and Bågø. At about 2230¹, the master took over the watch. Terrestrial navigation was being performed by a mate. The wind suddenly switched to north, causing the sails to beat aback and the vessel to luff hard. In spite of all the avoiding action taken, the AMPHITRITE traversed to the northeast and grounded at 2335; her position was φ 55°17.46'N λ 009°48.67'E.

It was not possible for the crew to refloat the vessel; therefore, a tug had to be requested, which hauled the AMPHITRITE free on the following evening and she continued her voyage unaided at about 2125.

Nobody came to physical harm. Moreover, an inspection by the crew revealed no damage to the vessel or environment.

¹ All times shown in this report are local = Central European Summer Time (CEST) = UTC + 2

2 SHIP PARTICULARS

2.1 Photo



© Hasenpusch Photo-Productions

Figure 1: Photo of the AMPHITRITE

2.2 Particulars

Name of vessel:	AMPHITRITE
Type of vessel:	Sailing vessel
Nationality/flag:	German
Port of registry:	Bremen
MMSI number:	211302660
Call sign:	DJRT
Owner:	Clipper DJS e.V.
Year built:	1887
Shipyard/yard number:	Camper/Nicholsen Gosport, UK
Classification society:	Germanischer Lloyd
Length overall:	44.55 m
Breadth overall:	6.44 m
Gross tonnage:	110
Deadweight:	184 t
Draught at time of accident:	3.70 m
Engine rating:	346 kW
Main engine:	2 diesel engines
Hull material:	Wood
Number of crew:	25

Ref.: 325/11

2.3 Voyage particulars

Port of departure:	Middelfart
Port of call:	Anchorage south of Lyø
Type of voyage:	Other shipping International
Cargo information:	None
Draught at time of accident:	3.70 m
Manning:	25
Pilot on board:	No
Canal helmsman:	No
Number of passengers:	0

2.4 Marine casualty or incident information

Type of event:	Serious marine casualty/grounding
Date, time:	29 June 2011, 2335 CEST
Location:	Little Belt
Latitude/Longitude:	ϕ 55°17.46'N λ 009°48.67'E

Excerpt from Nautical Chart D16, BSH

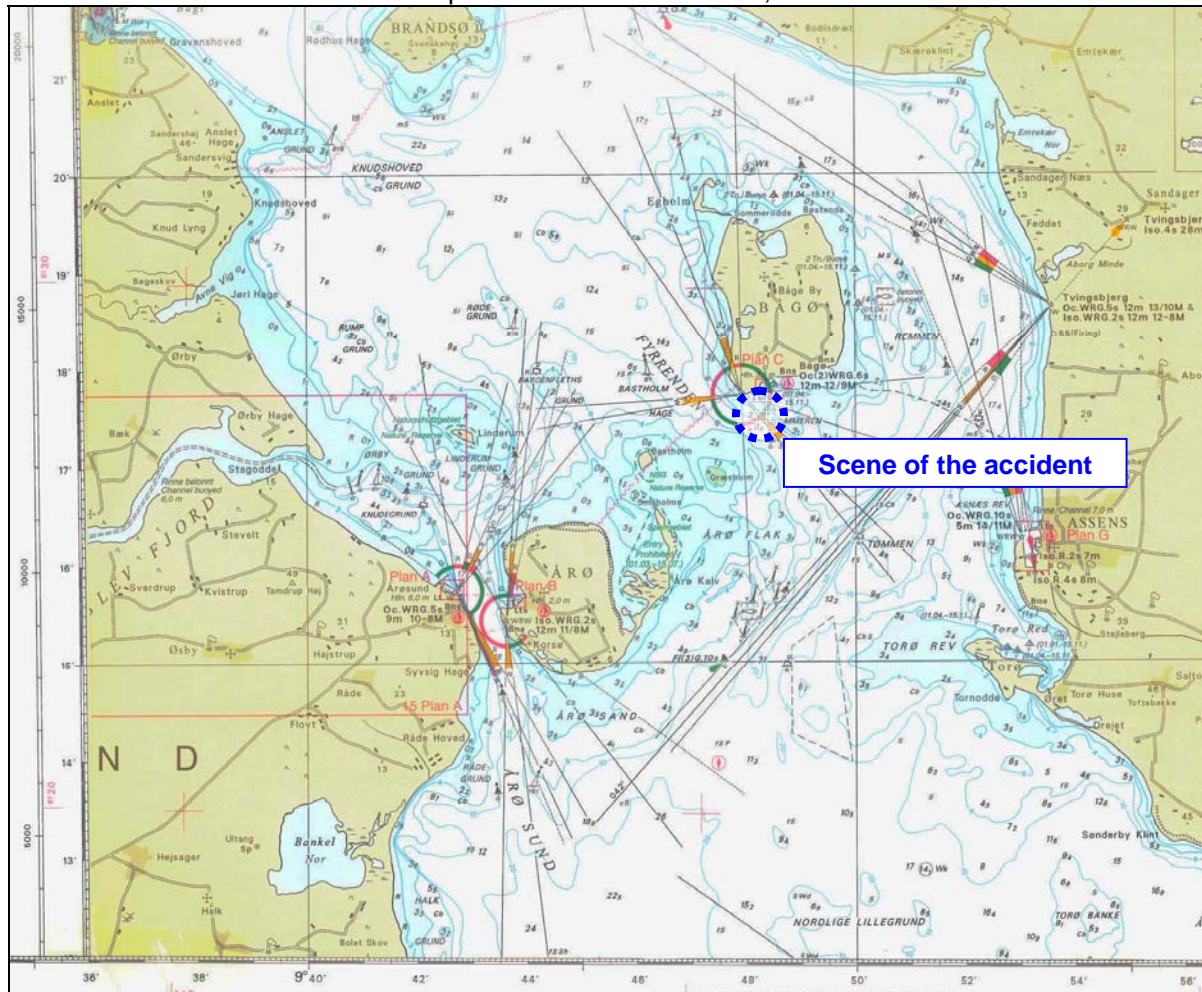


Figure 2: Nautical chart showing the scene of the accident

Excerpt from Nautical Chart D16, BSH

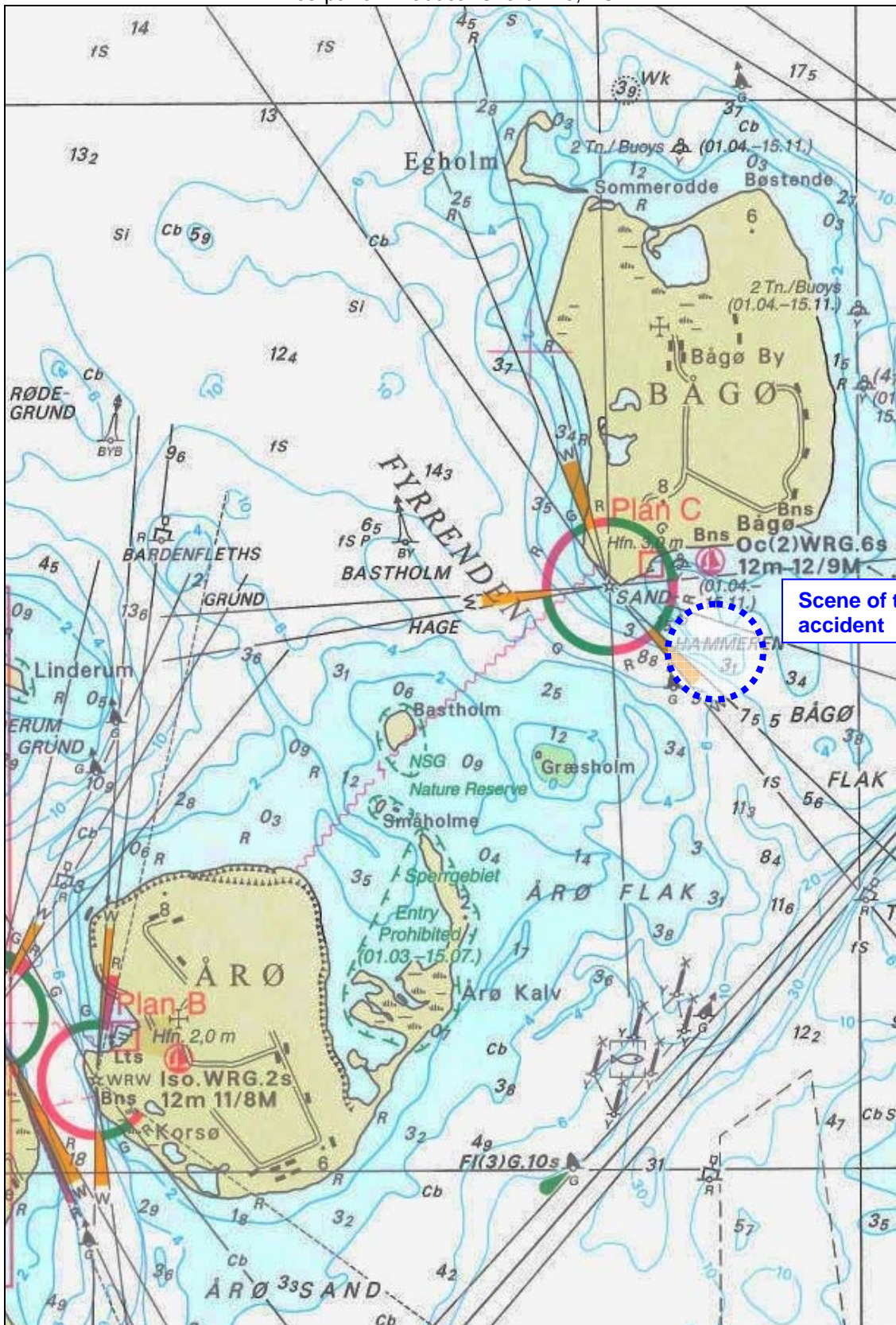


Figure 3: Scene of the accident in detail

3 Course of the accident and investigation

3.1 Course of the accident according to witness statements

On 29 June 2011, the AMPHITRITE was on one of her training voyages within the context of the articles of association to promote yachting and youth welfare from Middelfart en route through the Little Belt to the Isle of Lyø. 25 members were on board.

A 3-4 Bft wind from the southwest prevailed during the day. During the evening, it veered west to northwest. The vessel was sailing with outer and inner jib, fore sail, schooner, main and mizzen sail. The main sail and mizzen were secured with bull tackle and the schooner sail with gybe preventer.

Since a west wind prevailed in the evening, it was decided to take the narrow passage between the islands of Årø and Bågø. Another reason for this was to avoid the merchant shipping, which tended to take the eastern route.

At about 2230, the master ordered that the engine be made ready and took over the watch. The radar was in operation and monitored by the master. The mate on duty navigated by conventional terrestrial chart. Reportedly, a non-approved electronic nautical chart was also used. An experienced helmsman was at the helm and four other crew members completed the watch.

The vessel was sailing on a port tack. Shortly before the green buoy, the wind suddenly switched to north and the sails beat aback, causing the vessel to luff hard. The vessel started to turn to port and move towards the shallows. The master immediately gave orders for the helm to be set to hard to starboard, the engine to full ahead and the sails to be slackened. In spite of this avoiding action, the AMPHITRITE traversed further to the northeast and grounded at 2335; her position was $\phi 55^{\circ}17.46'N \lambda 009^{\circ}48.67'E$.

Since the water dropped rapidly due to the wind conditions, all attempts to refloat the vessel failed.

All sails were recovered and the bilges checked. Water ingress was not found.

At 2015 on 30 June 2011, the requested tug, BURE, arrived, which hauled the AMPHITRITE free without any complications after establishing the line connection and she was able to continue her voyage unaided at 2125.

A careful inspection of the vessel by the crew revealed that no damage had been caused.

3.2 Investigation

3.2.1 Technical evidence

The AMPHITRITE is not required to carry either a VDR or an AIS. Accordingly, neither was present. Consequently, technical evidence does not exist for the course of the accident.

3.2.2 Weather report

Preparation of a weather report was not undertaken because it is not possible to obtain evidence of suddenly shifting winds due to the geographical situation, especially in the area in which the vessel was operating.

3.2.3 Qualification

The master has held a certificate of proficiency for the role of master and chief mate in all areas and size categories (AG) since 1965. He also holds a recreational sea skipper licence (Sportseeschifferschein) with a supplementary entry endorsing his ability to navigate traditional vessels and operate machinery on traditional vessels as well as a general radio operator certificate and long range certificate (LRC). The long range certificate is an internationally valid radio operating certificate. It entitles the holder to participate in marine and mobile radiotelephony, including via satellite, on pleasure craft. It covers the operation of marine radiotelephony stations, ship earth stations, and safety systems (GMDSS).

By his own account, he has navigated traditional vessels for 30 years.

The mate has held the recreational sea skipper licence since 2000 with an endorsement for traditional vessels from 2004.

It was possible to review all the aforementioned certificates of each person with the support of the BSH.

3.2.4 Voyage planning

The voyage planning for Wednesday 29 June 2011 involved sailing from Middelfart for an evening arrival on the northern coast of the Isle of Lyø (SW of Faaborg) as the anchorage was protected from winds from the SE across the SW to the NW by a hook-shaped spur on the NW corner of the island.

The decision in response to the wind to use the route via Bredningen was not taken until the evening at about 2200. Added to this was the argument that merchant shipping uses the eastern passage. A number of coasters and coal tankers pass through the eastern passage, especially at night. By all accounts, the less navigated route is the western one. The wind was favourable for the western passage, it reportedly swung west at 2200. Therefore, a southerly course over ground was a good option.

The rapidly rising northern side of the Fyrrenden fairway, which is not marked by buoys, was reportedly accounted for by observing the distance to Bågø on the radar. Furthermore, the fairway's northern buoy was reportedly passed at close proximity. Since it was light that night, the non-illuminated buoys (one on the northern and one on the southern end of the fairway) and the coastline were reportedly clearly identifiable.

The master reportedly took over the watch for the passage through Fyrrenden. The mate also navigated by terrestrial means. The watch was made up by an experienced helmsman and four other members. Reportedly, all the members of the watch were able bodied.

3.2.5 Object of the association

According to the website of the association, "Clipper" Deutsches Jugendwerk zur See e.V., section 1 paragraph 2 of the articles of association states the following²:

"The object of the association is to provide young people and, as the case may be, other parties interested in sailing with the opportunity of participating in yachting on appropriate sailing vessels and under expert guidance within the context of traditional seamanship.

Active participation in the extraordinary, sport-based sailing experience as well as the particular conditions of life at sea aim to give special impetus to physical and cognitive development in the educational tradition of sail training vessels. At the same time, team spirit should be promoted, a sense of responsibility developed and social skills practiced – here, all indispensable – in the spirit of democratic education. Races (especially vintage regattas) should be included in the sailing program, if possible.

It is in this spirit that the association makes the promotion of yachting and youth development, and beyond that youth welfare, its specific mission. It pursues charitable purposes as defined in the 'tax-privileged purposes' section of the German tax code exclusively and directly. The association operates on an altruistic basis. Its primary interest does not entail the pursuit of its own commercial gain. The encounters with other people and cultures peculiar to seafaring aim to promote international awareness, tolerance in all areas and understanding between peoples. The association does not regard pre-vocational or yachtsmen training as its mission; instead, the communication of maritime knowledge and skills is the natural corollary of group life on board a sailing vessel.

New regular crew members learn how to handle and navigate a sailing vessel independently under the guidance of experienced clipper masters."

² <http://www.clipper-djs.org/verein/satzung/>

4 Conclusion

As far as the BSU is aware, this marine casualty did not cause human injury, damage to the vessel or environmental pollution.

There was room for improvement vis-à-vis the manner in which the association's committee cooperated with the BSU. The BSU's investigation was impeded time and again by the hesitant flow of information. For example, the receipt of several witness statements in the interest of obtaining a more comprehensive picture of events was not made possible up until the very last.

According to art. 7 'Ordinance on the Safety of Shipping', every master and owner who sails a vessel under German flag is obliged to immediately report and provide information on any incident which causes damage or gives rise to danger with respect to the vessel.

The objective of the BSU's safety investigations, helping to improve maritime safety, should also be in the interest of the non-profit operating association of the AMPHITRITE. However, faltering cooperation made that objective unachievable in the present investigation; therefore, it is being concluded with a summary report. Nevertheless, the potential hazard associated with running aground for nearly 24 hours with 25 people on board is not insignificant. The BSU recommends that the operating association assess this marine casualty internally and take precautions to avoid a repetition. In particular, the priority individual determinants have when deciding on one route or the other should be evaluated. That does not only include the navigable water area, but also the number of sails set and the number of people on watch so that unforeseen sailing manoeuvres can be performed effectively when required.

5 Sources

- Written statements by the ship's command
- Technical paper of the Federal Maritime and Hydrographic Agency (BSH)
- Nautical charts and vessel particulars (BSH)