



Bundesstelle für Seeunfalluntersuchung
Federal Bureau of Maritime Casualty Investigation

Summary Investigation Report 218/21

Incident

**Towing of the small vessel TÖWI VI after failure of
the outboard motor on the voyage from Juist to
Norddeich on 20 July 2021**

13 July 2022

This summary report in accordance with Article 27(5) of the Law on Improving Safety at Sea by Investigating Marine Accidents and Other Incidents (German Maritime Safety Investigation Law, "Seesicherheits-Untersuchungs-Gesetz" SUG) is a simplified report pursuant to Article 14(1) sentence 2 of Directive 2009/18/EC of the European Parliament and of the Council dated 23 April 2009, establishing the fundamental principles governing the investigation of accidents in the maritime transport sector.

The investigation was conducted in accordance with the above legislation. Accordingly, the sole objective of the investigation is the prevention of future accidents. The investigation does not serve to ascertain fault, liability, or claims (Article 9(2) SUG).

This 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 investigation report.

Publisher:
Bundesstelle für Seeunfalluntersuchung
Bernhard-Nocht-Str. 78
20359 Hamburg



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 Ship's photo



Figure 1: Small vessel TÖWI VI¹

1.2 Ship's particulars

Name of ship:	TÖWI VI
Type of ship:	Small vessel ²
Flag:	Germany
Port of registry:	Juist
Call sign:	DJ8104
Ship's operator:	Töwerland-Express GmbH
Year built:	2020
Ship yard:	V-Boats
Type:	Voyager Long Cabin
Length over all:	7.99 m
Length of ship's hull:	7.77 m
Breadth overall:	2.89 m
Draught (max):	0.80 m
Engine rating:	184 kW
Hull material:	Aluminium

1.3 Voyage particulars:

Port of departure:	Juist
Port of call:	Norddeich
Type of voyage:	Other maritime shipping / National
Crew:	2

¹ Source: Stefan Erdmann, erd@jnn.de.

² Here used within the meaning of the attachment 1a part 6 chapter 1 No. 2.1.2 to the §§ 6 and 6a of the Ship Safety Ordinance (Schiffssicherheitsverordnung).

Draught at the time of the accident: 0,8 m
Number of passengers: 7

1.4 Marine Casualty Information

Type of marine casualty: Incident, towing after propulsion failure
Date/Time: 20 July 2021, 1030
Location: Fairway Norddeich, Buoy B13
Breadth/Length: $\Phi 53^{\circ} 39,58'N, \lambda 007^{\circ} 8,41'O$
Voyage segment: Estuary trade
Consequences: Gearbox damage to the outboard motor, minor environmental pollution

Extract of Navigational Chart INT 1160 des BSH

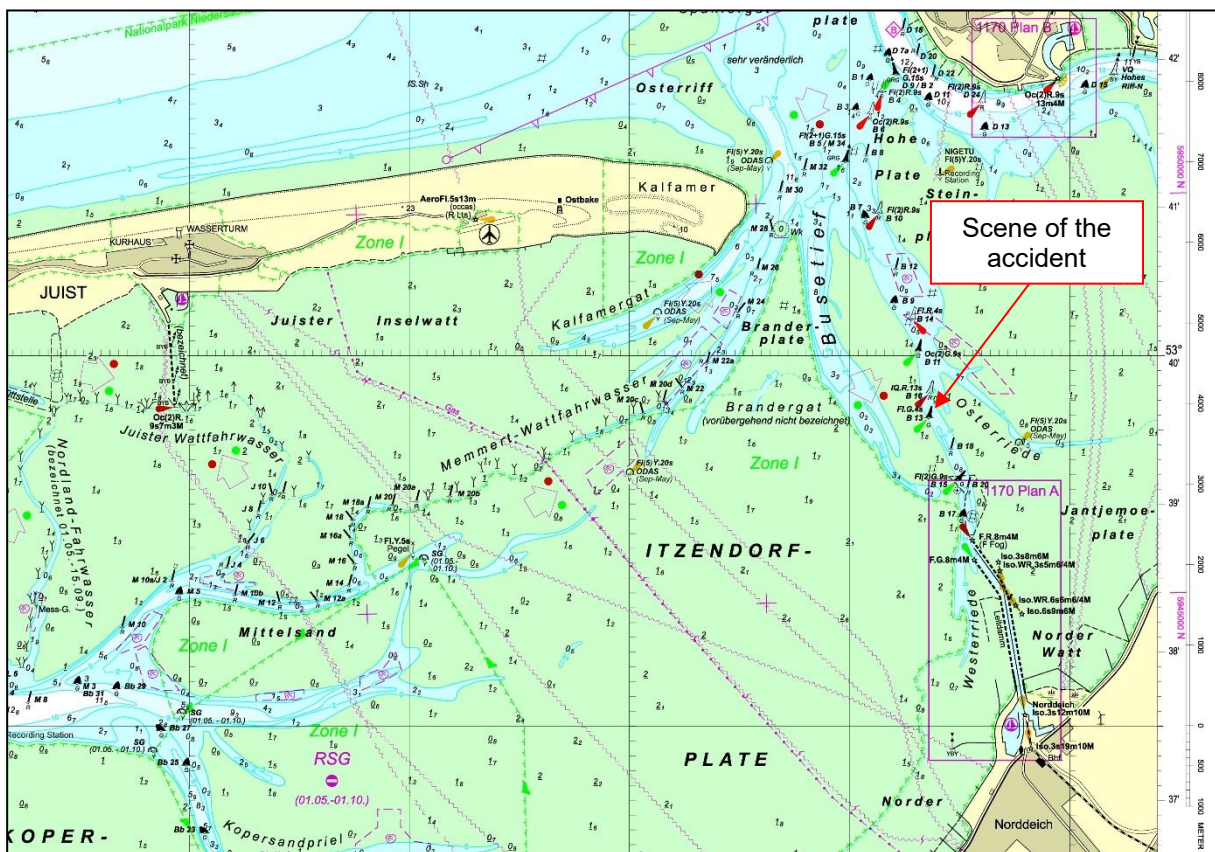


Figure 2: Navigational Chart with scene of the

2 COURSE OF THE ACCIDENT AND INVESTIGATION RESULTS

2.1 Course of the accident

On 20 July 2021, the small vessel ³ TÖWI VI was en route from Juist to Norddeich in order to transport 7 passengers to the mainland. The weather conditions were good. According to the information given by the skipper to officers of the Waterways Police station Emden, there was an unexpected failure of the outboard motor used as propulsion at the level of buoy B 13 of the fairway to Norddeich. Gearbox damage was suspected. Since the outboard motor was the only means of propulsion, the TÖWI VI drifted in the fairway for some time. Later on, the TÖWI VI was towed to the port of Norddeich by another small vessel, where the passengers immediately went their separate ways. According to the skipper, no person was injured by the incident and no damage was caused to the hull. The passengers could not be questioned by the Waterways Police. The vessel was also no longer available for inspection, as it had already been taken away by land.

Within the connection of the gearbox damage, a small quantity of gearbox oil escaped, whereby a minor water pollution occurred.

The voyage of the TÖWI VI could not be reconstructed due to the non-prescribed and therefore non-existent equipment with a device emitting AIS⁴-signals.

2.2 Investigation results

2.2.1 Safety requirements

By the company Töwerland-Express GmbH, the TÖWI VI was and is used for commercial transport of passengers between the East Frisian Islands and the mainland. The company existing since the year 2019 operates other similar vessels for this purpose. In the process, no more than 12 passengers per trip are transported. Thus, the TÖWI VI is not a passenger vessel within the meaning of the regulations, but a so called small vessel in commercial use⁵.

This is a national category which by definition according to the Ship Safety Ordinance (SchSV) includes cargo ships up to a gross tonnage of 100.⁶ The ship-related safety requirements applicable to small vessels are regulated in detail and conclusively in chapter 3 of Part 6 of Annex 1a.

The currently applicable safety requirements of Chapter 3 for small vessel do not apply to small vessels with a ship length of less than 8 m.⁷ This means that there are

³ See footnote 2.

⁴ Automatic Identification System.

⁵ The type of use for ordinary passenger transport excludes categorization as recreational or work boat.

⁶ Chapter 1 No.. 2.1.2. of part 6 of Annex 1a to §§ 6 and 6a SchSV.

⁷ Chapter 3 No.. 1.1 of part 6 of the Annex 1a to the §§ 6 and 6a of the SchSV.

currently no regulations in Germany regarding the construction, equipment (including fire protection and lifesaving appliances) and technical operation of small vessel of this size, as no other technical rules or specifications apply either. Accordingly, no official inspections of these small vessels take place in this regard.⁸

The TÖWI VI is a vessel of the type Voyager Long Cabin S, which was placed in the market by the company SEAMACHINE GmbH. For the boat, an individual acceptance for the subsequent certification of the design was carried out by the accredited certification body SL Swiss Lloyd GmbH and a certificate of conformity was issued with regard to the directive 2013/53/EU applicable to recreational vessel. According to this, the boat complies with the design category B - High Seas. Accordingly, it can be used up to wind force 8 Bft and a significant wave height of 4 m. The certificate of conformity thus gives a good impression of the soundness of the design and construction. However, the certification is of no significance for the operation of the boat in this case, as the TÖWI VI was used for commercial purposes.

2.2.2 Ship's manning

In accordance with the Ship Manning Ordinance (SchBesV) in force at the time of the accident, no Safe Manning Certificate was required for the TÖWI VI since her length is less than 8 m.⁹ The operator did not voluntarily apply for a certificate.

The vessels operator complied with its obligation in accordance with the Safe Manning Ordinance¹⁰ by manning the TÖWI VI with the holder of a certificate of competency.

In 2019, a German certificate of competence as master BKü (Skipper in coastal fishing) had been issued for the skipper by the Bundesamt für Seeschifffahrt und Hydrographie (Federal Maritime and Hydrographic Agency). This qualifies to navigate fishing vessels with a length of less than 24 m.

In accordance with the Seafarers' Competency Ordinance (See-BV)¹¹ in force at the time of the accident, all certificates of competency for nautical ship service on fishing vessels included the authority to act as a ship's master NSF¹². However, this certificate of competency was only for navigating certain vessels. Small vessels used for passenger transport, hereafter referred to as "water taxis," were not included in the final list¹³ because this group of vessels did not exist at the time the See-BV was drafted. Therefore, a certificate of competency NK 500 would be formally required to navigate a water taxi. However, the investigators of the BSU assume that the holders

⁸ The same would apply to any categorization as a workboat, cf. 1.2.7 of Chapter 1 Part 6 to Annex 1a.

⁹ § 8 Section 1 sentence 3 SchBesV as amended on 18 July 2013.

¹⁰ § 2 Section 1 and § 4 Section 1 SchBesV.

¹¹ § 33 Section 3 sentence 4 See-BV of 8. May 2014.

¹² NSF – Skipper small vessels

¹³ § 2 Section 3 No. 21 See-BV of 8 May 2014

of the certificate of competence BKü are certainly sufficiently competent. This is true as long as the ship operator acted in accordance with the principle that "persons assigned in the shipping company and on the ship for this purpose are effectively selected, instructed, taught, observed and assisted".¹⁴

According to the skipper's statement to the officers of the Waterways Police, two crewmembers were on board the TÖWI VI at the time of the accident. Since the skipper did not comment on the BSU's questions, it is unknown what qualifications the second crew member possessed

2.2.3 Operation of water taxis

The small vessels used for the passenger transport < 8 meter, the so called water taxis, became particularly widespread at the North sea coast of Lower Saxony in the last years. They connect the offshore islands with the mainland or with each other. They operate in relatively sheltered waters. These water taxis compete with the established ferry shipping companies. The user-related advantage of water taxis are the very high speed of the small boats used and the greater independence from tidal water levels. However, water taxis are also used on the Baltic Sea, where they connect more distant marinas with city centres, such as in Neustadt/Holstein.

However, during the research done as part of the investigation, the investigators came across a report stating that courier and service trips to offshore facilities are planned.¹⁵

At the time of the accident, the TÖWI VI's operator took measures on his own initiative to ensure a safe operation of his fleet. The vessels used by him had a certificate of conformity as a recreational vessel with design category B and were operated by skippers with a certificate of competency. The operator was also in contact with the ship safety division of BG Verkehr¹⁶ for this purpose.

The TÖWI VI is equipped with a VHF marine radio with DSC¹⁷ and a radar unit. There are life jackets on board for all persons.

However, such a conduct in selecting suitable vessels and as well as manning and equipment is not a matter of course. For example, the investigation of the GEO PROFILER marine casualty (BSU report 258/18) and RIGI¹⁸ (report of the Danish Maritime Accident Investigation Board) made it clear that there was a lack of regulations for the use of small vessels < 8 meters, and not only in Germany.

¹⁴ § 3 Sentence 2 Ship Safety Act (SchSG).

¹⁵ Ostfriesenzeitung, 14. Juli 2020.

¹⁶ Brief for Berufsgenossenschaft Verkehrswirtschaft Post-Logistik Telekommunikation (Employer's Liability Insurance Association for Transport, Post and Logistics, Telecommunications).

¹⁷ Digital Selective Calling.

¹⁸ <https://dmaib.com/reports/2018/rigi-foundering-on-23-april-2018/>. (25. April 2022).

In the meantime, the Federal Government has reacted. With the amendment of the SchBesV on 23 June 2021 and the amendment of the See-BV on 28 July 2021, a Safe Manning Certificate is now required for all merchant ships and a new certificate of competency for master national voyage BRZ 100 (master NK 100) was introduced.

In the view of the BSU, an amendment of the Ship Safety Ordinance is also necessary to regulate the technical requirements for small vessels under 8 meters. This is particularly the case since such vessels are apparently increasingly being used for commercial purposes.

According to the findings of the Waterways Police of Lower Saxony, 14 water taxis of different operators are navigating in the area of the East Frisian Islands.¹⁹ Since meanwhile traditional ferry companies use water taxis as well, there seems to be a sufficient and possibly increasing demand. The BSU already sees a higher risk potential for people and the environment due to the speeds driven. The shallow water areas present in the tidal flats further increase the risk because of possible groundings. One of the operators reported that it is not possible to sail with the small boats at all water levels.²⁰

3 Conclusions

Due to the minor impact of the described incident, the BSU dispenses with an extensive investigation. Furthermore, the essential problems in using small vessels were previously worked out with the investigation of the marine casualty involving the GEO PROFILER. Part of the safety recommendations published in May 2019 in this connection were implemented.

The failure of TÖWI VI's propulsion considered here, took place without major damages for the involved persons and the vessel itself. The investigators of the BSU assume, based on the construction quality of the boat, the equipment and the manning with a second crewmember, that circumstances that are even more adverse could have been mastered or help could have been called.

The suitability of a small vessel < 8 meter and her equipment for commercial use are as depicted are so far solely the responsibility and reliability of the operator. However, as a result of this and the other accident investigations mentioned above, as well as the fact that such fast small vessels are now increasingly being used to transport people, the BSU sees an increased potential risk. The possible extension of the area of operation of such vessels to the coastal foreland already mentioned, underlines the need for regulatory measures. The hazard potential should be reduced through

¹⁹ E-Mail of the Waterways Police Inspectorate Oldenburg Inspectorate to the Ship Safety Department of BG Verkehr, 04/2022.

²⁰ <https://magazin.norderney-zs.de/news/toewerland-express-partner-von-frisonaut>, vom 29. April 2021. (25.04.2022).

appropriate requirements for the construction, equipment and operation of these vessels within the framework of the Ship Safety Ordinance, in order to provide operators with clear specifications, thus ensuring legal certainty for all parties involved and fair competitive conditions. The implementation of the corresponding safety recommendation of the BSU to the then Federal Ministry of Transport and Digital Infrastructure from the investigation report on the sinking of the GEO PROFILER is thus still pending.