



# Bundesstelle für Seeunfalluntersuchung

## Federal Bureau of Maritime Casualty Investigation

Federal Higher Authority subordinated to the Ministry of  
Transport and Digital Infrastructure

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**E-Mail: [posteingang-bsu@bsh.de](mailto:posteingang-bsu@bsh.de) 25 February 2014**

### Press Release 2/14

The Federal Bureau of Maritime Casualty Investigation (BSU) hereby gives notice that the investigation report No.160/13 was published on 25. February 2014. The report deals with the water ingress on the traditional vessel RAKEL on 21 June 2013 in the North Sea about 10 nm south of Heligoland.

Upon request the report will be forwarded. Alternatively this report – as well as all previous reports – is available on the website <http://www.bsu-bund.de> and can be downloaded.

Short version:

### Press Release 2/14

At about 16:30 on 21 June 2013 heavy water ingress occurred on board the traditional sailing vessel RAKEL while she was sailing from Bremerhaven to Heligoland. At about 18:30 the rescue cruiser HERMAN MARWEDE was summoned to assist by VHF. The vessel was kept drained by means of a bucket chain and the vessel called at the port of Heligoland. There were 11 persons on board, eight of which were provided medical care as a

precaution. On person suffered a laceration to the eye, another person suffered a contusion to the ribs.

The Federal Bureau of Maritime Casualty Investigation determined that the 117-year old traditional vessel RAKEL was not seaworthy during the serious marine casualty. The water ingress can mainly be attributed to the several plank seams not having been properly sealed

and the plank butts of the shell plating.

Due to the investigation involving these accident the Federal Bureau of Maritime Casualty Investigation urgently recommends to revise the Safety Directive for Traditional Vessels and include the additional safety regulations.

The investigation report was published by the Federal Bureau of Maritime Casualty Investigation on 25 February 2013 and can be read on [www.bsu-bund.de](http://www.bsu-bund.de).

## **Long version:**

### **Serious marine casualty – water ingress on the traditional vessel RAKEL on 21 June 2013 on the North Sea about 10 nm south of Heligoland**

At about 1630 on 21 June 2013 heavy water ingress occurred on the traditional vessel RAKEL while she was sailing from Bremerhaven to Heligoland. At about 1830 the rescue cruiser HERMAN MARWEDE was summoned to assist by VHF. The vessel was kept drain by means of a bucket chain and the vessel called at the port of Heligoland. There were 11 persons on board, 8 of which were provided medical aid as a precaution. One person suffered a laceration to the eye another, suffered a contusion to the ribs.

The vessel was run aground as a precaution and pumped out by the fire brigade.

The Federal Bureau of Maritime Casualty Investigation determined that the 117-year old traditional vessel RAKEL was not in a seaworthy condition during the serious marine casualty. The water ingress can mainly be attributed to the plant seams having been improperly sealed and plank butts of the shell plating. The breadth of the seams would suggest that the shell plating could not be closed by expanding the planks. A single instance for the damage that would be responsible for the water ingress could not be detected. The cause for the water ingress appears to be also ailing frames and frames not being connected anymore with the strakes. The planks were bolted with the inner ceiling as a final means of fixation. Consequently, the longitudinal strength is no longer given. If the vessel, in accordance with the regulations for seagoing vessels, had been divided into sections which could have been drained separately, the water ingress could have been located and the watertight integrity enhanced. The distress could have been prevented, if the longitudinal strength had been sufficient and the vessels hull watertight.

Moreover, the investigation of the BSU revealed that the survey procedure for traditional vessels does not follow a harmonized approach. While the surveyors of the Ship Safety Division predominantly adhere to the requirements of the classification societies, the free surveyors seem to possibly tolerate certain safety relevant conditions. Marine casualties involving traditional vessels already investigated by the BSU and having revealed technical deficiencies were always surveyed by free experts. Ship's safety obviously requires harmonization. The Federal Bureau of Maritime Casualty Investigation recommends the urgent revision of the Safety Directive for Traditional Vessels and the inclusion of the following regulations:

1. Reproduction and conversions of historical water craft shall be carried out under plan approval and construction supervision of an accredited expert of a classification society

2. Traditional vessels shall carry approved stability documents and sailing directions on board. These documents must be prepared on the basis of a combined inclining and rolling tests in accordance with the requirements of a classification society or an accredited expert.
3. A harmonized approach for the survey of traditional vessels shall be defined for surveyors of the Ship Safety Division and accredited experts for traditional vessels.
4. The scope of the survey of the vessel's structure, shell plating and bulkheads shall be harmonized. It must be included in the Directive that fittings and ceilings must be partially removed when surveying frames, floors, and deck beams when necessary.
5. In order to ensure that persons are protected exhaust pipes with a surface temperature of more than 80°C must be fully insulated.

Volker Schellhammer  
Director of the Federal Bureau