



Bundesstelle für Seeunfalluntersuchung
Federal Bureau of Maritime Casualty Investigation
Federal Higher Authority subordinated to the Ministry of Transport
and Digital Infrastructure

Interim Investigation Report

pertaining to the investigation report

No. 455/15 and 58/16

Serious Marine Casualties

**Fire of a cargo of charcoal on the
container ship MSC KATRINA
on 20 November 2015
and on the
container ship LUDWIGSHAFEN EXPRESS
on 21 February 2016**

25 November 2016

Under the terms of § 28 Para. 1 sentence 2 of the act to improve safety of shipping by investigating marine casualties and other incidents (Maritime Safety Investigation Act – SUG) of 16 June 2002, as amended in the announcement of 1 March 2012 (Federal Law Gazette I, page 390), last amended by Art. 22 of the decree of 24 May 2016 (Federal Law Gazette I, page 1217) in conjunction with Art. 14 Para. 2 of the directive 2009/18/EC of the European Parliament and 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 report in case an investigation report dealing with very serious or serious accidents cannot be prepared within the term of 12 months.

Issued by:
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1 FACUTAL INFORMATION

1.1 MSC KATRINA

1.1.1 Photo MSC KATRINA



Figure 1: Photo of MSC KATRINA

1.1.2 Ship particulars MSC KATRINA

Name of ship:	MSC KATRINA
Type of ship:	Full container ship
Nationality/Flag:	Panama
Port of registry:	Panama
IMO number:	9467445
Call sign:	3EZD3
Owner:	Potty Holding S.A.
Operator:	MSC Mediterranean Shipping Company S.r.l
Year built:	2012
Shipyard/Yard number:	STX Offshore & Shipbuilding Co. Ltd. / S-3021
Classification society:	DNV GL
Length overall:	365.74 m
Breadth overall:	48.44 m
Gross tonnage:	140,096
Deadweight:	54,157 t
Draught (max.):	15.50 m
Engine rating:	72,240 kW
Main engine:	MAN Diesel & Turbo 12k98MC-C7
(Service) Speed:	25.2 kts
Hull material:	Steel
Minimum safe manning:	24

1.1.3 Voyage particulars MSC KATRINA

Port of departure:	Antwerp (Belgium)
Port of call:	Hamburg (Germany)
Type of voyage:	Merchant Shipping/International
Cargo information:	Container
Draught at time of accident:	11.5 m
Manning:	24
Pilot on board:	Yes
Number of passengers:	None

1.1.4 Marine Casualty or incident information

Type of marine casualty or incident:	Serious marine casualty; cargo fire, fire in a container loaded with charcoal in cargo hold 2
Date, time:	20 November 2015/0349 ¹
Location:	Elbe, km 763
Latitude/Longitude:	ϕ 53° 59,5'N λ 008° 15,0'E
Ship operation and voyage segment:	Estuary trading
Consequences:	Cargo in one container destroyed, several containers damaged by fire water

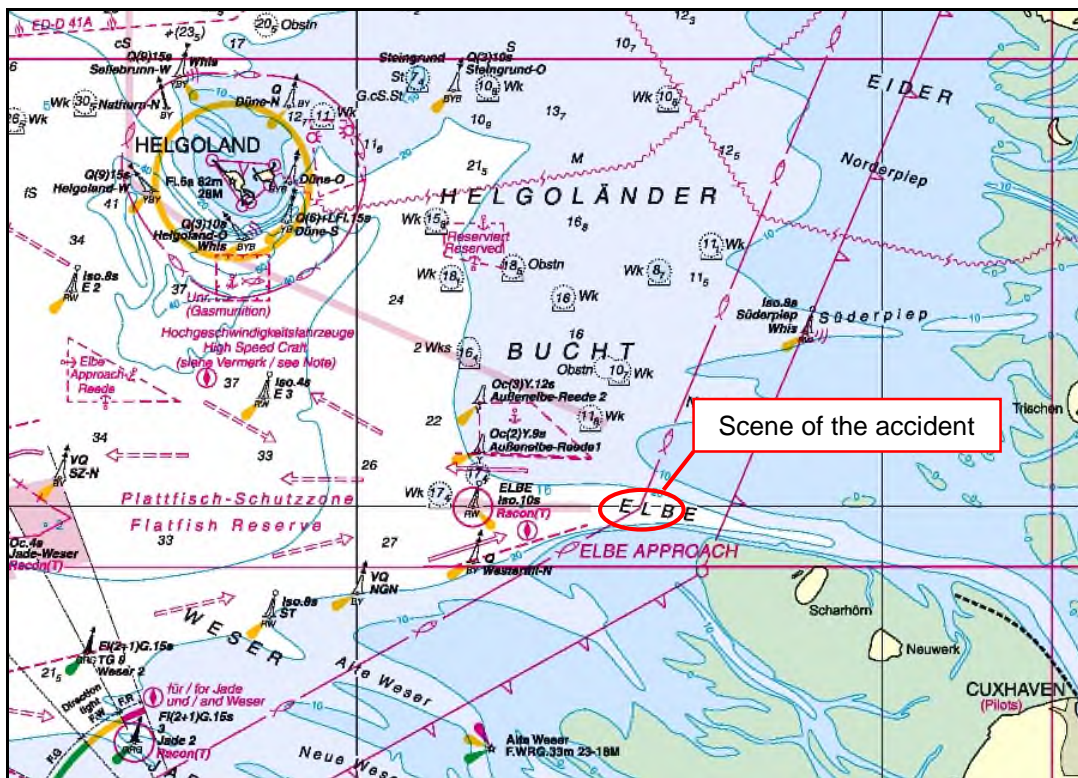


Figure 2: Scene of the accident

¹ Time in Central European Time (CET)

1.1.5 Shore authority involvement and emergency response

Agencies involved: Central Command for Maritime Emergencies, Waterway Police Hamburg, VTS Cuxhaven, fire department Cuxhaven,

Resources used: Water protection vessel NEUWERK, Federal Police Helicopter, a firefighting unit, rescue cruiser HERMANN Helms, Waterway Police boat BÜRGERMEISTER BRAUER, emergency physician on board the ship

Actions taken: Entering of the port discontinued and ship ordered to proceed to the Outer Elbe anchorage, situation assessment by the crew and later on by the firefighters, firefighters flooded affected container with water

Results achieved: After the fire was extinguished, the ship was permitted to call at the port of Hamburg, no harm was caused to people, no environmental pollution

1.2 LUDWIGSHAFEN EXPRESS

1.2.1 Photo LUDWIGSHAFEN EXPRESS



Figure 3: Photo of LUDWIGSHAFEN EXPRESS

1.2.2 Ship particulars LUDWIGSHAFEN EXPRESS

Name of ship:	LUDWIGSHAFEN EXPRESS
Type of ship:	Full container ship
Nationality/Flag:	Germany
Port of registry:	Hamburg
IMO number:	9613018
Call sign:	DDOR2
Owner:	Hapag-Lloyd AG
Operator:	Hapag-Lloyd AG
Year built:	2013
Shipyard/Yard number:	Hyundai Heavy Industries/2499
Classification society:	DNV/GL
Length overall:	366.52 m
Breadth overall:	48.35
Gross tonnage:	142,295
Deadweight:	127,113 t
Draught (max.):	14.50
Engine rating:	45,100 kW
Main engine:	MAN Diesel & Turbo 11K98ME7
(Service) Speed:	23.6 kts
Hull material:	Steel
Minimum safe manning:	21

1.2.3 Voyage particulars

Port of departure:	Singapore
Port of call:	Le Havre (France)
Type of voyage:	Merchant Shipping/International
Cargo information:	Container
Draught at time of accident:	11.5
Manning:	24
Pilot on board:	No
Number of passengers:	None

1.2.4 Marine casualty or incident information

Type of marine casualty or incident:	Serious marine casualty, fire in one container, fire in a container loaded with charcoal on the upper deck of bay 70 (cargo hold 9), increase in temperature in an adjacent container, later fire in another container
Date, time:	21 February 2016, 1630 ²
Location:	Northern part of the Red Sea
Latitude/Longitude:	ϕ 24° 00,5'N λ 036° 35,1'E
Ship operation and voyage segment:	Open Sea
Consequences (for people, ship, cargo, environment, other):	Cargo in one container destroyed, cargo in another 2 containers flooded



Figure 4: Scene of the accident

² Local time= UTC+ 2 hours

1.2.5 Shore authority involvement and emergency response

Agencies involved:	No authorities involved
Resources used:	Shipboard firefighting equipment
Actions taken:	Measurement of temperature by means of Infrared thermometer, extinguishing and cooling
Results achieved:	Cargo of the first container affected by the fire washed into the sea, second container affected by the fire submerged into the port basin by the port operator and placed on shore

2 Summary

The BSU-Investigation into both accidents revealed that all containers loaded with charcoal originated from the same shipper in Indonesia. Therefore, and particularly due to the similarities of the cases, both marine casualties will be summarized in the final investigation report.

Due to the discrepancy between the test result and the actual outbreak of the fire, the BSU carried out further investigations and consulted an expert.

2.1 MSC KATRINA

Early in the morning of 20 November 2015, the full container ship MSC KATRINA was in the Elbe estuary and en route to Hamburg. When the smoke detection system for the cargo hold 2 sounded and reported a smoke emission, the pilots had already embarked and the ship had passed buoy No. 1. At 0349, the Vessel Traffic Services Cuxhaven was notified of this. The navigator on duty ordered the ship shortly afterwards to turn and head to sea. Thereupon, the ship sailed to the Outer Elbe anchorage. Meanwhile, two crewmembers donned breathing apparatus and went into cargo hold 2 in order to assess the situation. They could not detect open fire. Furthermore, the crew prepared the operation of the CO₂-system.

The rescue cruiser HERMANN HELMS took a firefighting unit of the fire department Cuxhaven on board the MSC KATRINA. After having consulted the ships command, the unit started to assess the situation. In the further course of this additional firefighters were taken to the ship and the firefighters began to fight the fire. A 40 feet container loaded with charcoal and stowed in the 4. Layer was identified as the source of the smoke emission. Since the container was readily accessible for the fire fighting the operation of the shipboard CO₂- system was dispensed with. The firefighters flooded the affected container with water. Due to the unclear situation in the other container in this stack, which was also loaded with charcoal, the cooling was continued for a longer period.

Upon request of the Waterways and Shipping Office Cuxhaven, the Central Command for Maritime Emergencies assumed the overall operational leadership at 0900 on 20 November 2015.

As soon as the situation was considered safe, the MSC KATRINA was permitted to enter the port of Hamburg at 1441. The NEUWERK and HERMANN HELMS stopped their assistance at 1610. Most of the firefighters left the ship at 1745. Four fire fighters remained on board for the last part of the voyage. At 2312 the MSC KATRINA moored at the berth of the Eurogate Container Terminal without further incident.

On 21 November 2015, the Federal Bureau of Maritime Casualty Investigation started its investigation with the survey of the ship. The BSU seized the seven containers of the affected container stack. On 23 November 2015, the container affected by the fire and another container were surveyed. This also involved taking samples in order to especially determine the substance properties of the charcoal and compare them with the certificate issued by the shipper. The test requested by the Waterway Police revealed that the charcoal did not constitute a dangerous good within the meaning of class 4.2 of the IMDG-Code³ and did therefore not tend to self-ignition.

2.2 LUDWIGSHAFEN EXPRESS

On 21 February 2016, the container ship LUDWIGSHAFEN EXPRESS, flying the German flag, was in the northern part of the Red Sea and en route from Singapore to Le Havre. During work carried out on deck smoke was noticed, the source of which was detected in a container stowed on the hatch. The firefighting started immediately afterwards also involved the use of fognails hammered into the container. The container was flooded by means of them. After having determined heightened temperatures in the container stowed aside, which was also loaded with charcoal, this container was flooded as well. Spreading of the fire on further containers could be prevented by cooling. The ship reached the port of the Le Havre, where the cargo was to be discharged, without any further incident. There another burning container from the same consignment was detected during unloading. This container was submerged into the port basin by means of the container bridge by the port operator and then placed on shore.

The shipper also issued a certificate for this consignment confirming that the charcoal was not a dangerous good within the meaning of the IMDG-Code.

2.3 Investigation

Meanwhile, the investigation of the course of accident was concluded. Currently, the BSU is in the process of preparing the investigation report. Since the time limit of one year set by the European Union and implemented into national law by the Federal Republic of Germany, to publish an investigation report after a very serious or serious marine casualty has occurred, cannot be satisfied, the public is informed about the state of the investigation by this interim investigation report.

³ IMDG-Code= International Maritime Dangerous Goods-Code