



Bundesstelle für Seeunfalluntersuchung
Federal Bureau of Maritime Casualty Investigation
Bundesoberbehörde im Geschäftsbereich des Bundesministeriums
für Verkehr, Bau- und Wohnungswesen

Summary Investigation Report

156/03

Serious Marine Casualty

**Collision between CMV IVORY STAR I and the
Salvage Pontoons EUROPA and NUMAX on 1 June 2003**

15 April 2004

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 24 June 2002.

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

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Table of Contents

1	Summary of the marine casualty.....	4
2.	Scene of the casualty.....	5
3.	Vessel particulars and photos	6
4.	Course of the voyage/course of the accident.....	7
5.	Summary of damage/photos of damage	11
6	Sources.....	12

1 Summary of the Marine Casualty

At about 21.18 h local time (20.18 h UTC) on 1 June 2003 the container vessel MV IVORY STAR I sailing under German flag collided with a combination consisting of the Barges EUROPA and NUMAX carrying out wreck salvage work at the edge of the deepwater navigation channel in Badagri Creek while running out of the port of Lagos, Nigeria.

The collision occurred approx. 1.5 cables SSE of berth No.1 of the Tin Can Island Terminal during evasive action. CMV IVORY STAR I had been forced to make a change of course due to the fact that a vessel at anchor had along the navigation channel. At the time of the accident visibility was good and there was a light wind. There was no sea or swell.

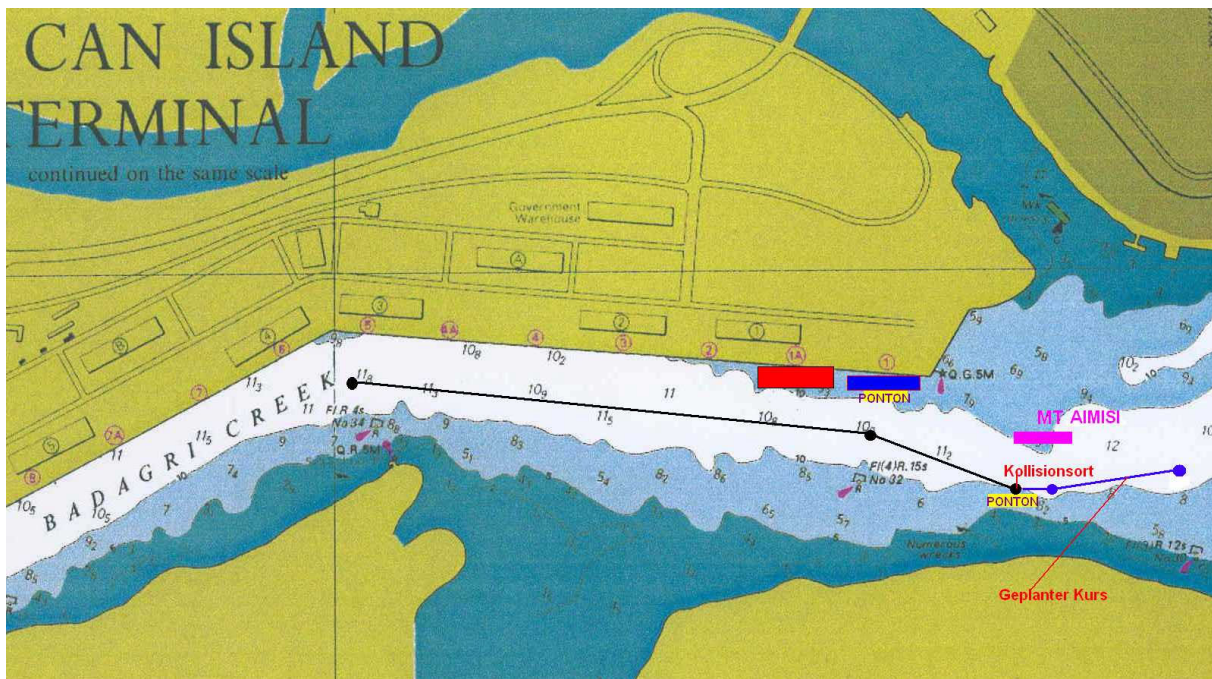
CMV IVORY STAR I was damaged in the forecastle area as a result of the collision. However, the vessel was able to continue its voyage up to the anchorage in Commodore Channel under its own power. The crane on Barge NUMAX broke off as a result of the accident. In the course of the night the Barge EUROPA sank due to a leak in the shell plating.

A Nigerian labourer on the Barge Combination broke both legs. There were no further injuries. No environmental damage was sustained.

2. Scene of the casualty

Nature of incident: Serious marine casualty
Date: 1 June 2003
Location: Badagri Creek Lagos; Position 006° 25.75'N 003° 21.81'E

At the time of the casualty visibility was approx. 7 sm. The wind was blowing from the north-west at a force of 2 Bft.



Sea chart: British Admiralty Chart 8212; Correction Status: **NtM 2001 – 39 / 3851**

3. Vessel particulars and photos



3.1. Vessel particulars MV IVORY STAR I

Name of vessel:	IVORY STAR I (ex. SEA LYNX)
Operator:	Conti Clarissa Schiffahrts-GmbH & Co. KG
Port of registry:	Hamburg
Nationality/Flag:	Germany
IMO No.:	9134490
Ship's call sign:	DGOO
Type of vessel:	Container Vessel
Crew:	17 persons + 1 pilot
Classification:	Germanischer Lloyd
Class:	100 A 5 Cont.MC, Aut
Year built:	1997
Building yard:	Daewoo / Korea
Length over all:	205.50 m
Width:	27.40 m
Max. draft:	15.80 m
Gross tonnage:	24,053
Deadweight:	28,370
Main engine/Manufacturer/Type:	B & W/Korea Heavy Ind. & Co./7L 60 MC
Engine rating:	13,340 kW
Steering system (type):	Semi-Spade
Bow thruster/Rating:	Kamewa Control Pitch Propeller/1020 kW
Propeller:	1 fixed pitch propeller right-hand
Speed:	19 kn

3.2. Salvage pontoons

Unfortunately it was not possible to obtain any technical particulars of the two Barges NUMAX and EUROPA, with which a Nigerian firm was carrying out wreck salvage work at the time of the accident. The photo below shows the Barge NUMAX with parts of the destroyed crane. Remains of the Barge EUROPA can be seen protruding from the water in the foreground.



4. Course of the voyage/course of the accident

4.1. Journey of the container vessel

The German container vessel MV IVORY STAR I left Berth No. 4 a of the Tin Can Island Terminal in the port of Lagos, Nigeria, at 20.24 h local time on 1 June 2003. The next port of destination was to have been Cotonou, Benin.

The bridge was manned by the Master and the Chief Mate, both of German nationality, as well as a Philippine seaman as helmsman and the Nigerian pilot, who had joined the vessel at 19.35 h. The forecabin was manned by the Philippine seaman.

The draft of CMV IVORY STAR I was 7.00 m forward and 7.55 m aft. The middle draft was about 7.28 m.

4.1.1. Master's Report

The responsible commanding officer described the course of the accident as follows in his Master's Report to the vessel operator:

After CMV IVORY STAR I had turned in the turning basin with tug assistance, the tugs had been dismissed at 21.04 h. The vessel had then started to pass the Badagri Creek at speed "slow ahead" (7 kn). Visibility had been very good and at this time had been about 7 sm; the sea had been smooth.

The Master had mainly been on the port bridge wing together with the pilot as the vessel was leaving and he called his instructions into the bridge to the helmsman.

At 21.10 h the vessel had passed Buoy No. 34 to starboard at a distance of 80 m and at the same time speed had been reduced to "dead slow ahead".

At the same time the Master had noticed a vessel at anchor directly in the course line. According to the information he supplied, the anchor place of this vessel, later identified as the Motor Tanker AIMISI, was in a south-southeast direction and at a distance of 1 cable (cbl) from the corner of berth No. 1. Both the Master and the pilot had been surprised by the unusual anchoring position of AIMISI.

Since berth No. 1 in turn was occupied by a large pontoon, the pilot had recommended passing the anchoring vessel on its starboard side in order to ensure further passage through Badagri Creek within the deep water line. In view of the good visibility and since no other lights could be seen on the starboard side, the vessel changed course from 98° to 111° at 21.15 h. Two minutes later they were to change course back to port again, so that MT AIMISI would have been passed at a distance of 70 m.

At 21.16 h the non-lighted Buoy No. 32 had been abeam. When the course was to be changed to port again at 21.17 h as planned, the bosun had reported via radio from the forecabin to the bridge that he could make out a dark object dead ahead.

The Master further stated that he immediately set the engine telegraph to "full astern" and then ran into the wing to see what was there. At the same moment he had perceived a small shock going through the entire vessel. Because of the complete darkness in the sector ahead he had not been able to perceive anything optically. He had ordered the bow thruster full to port in order to compensate the starboard turn of the bow with the start of the astern movement of the vessel.

At 21.20 h he had stopped the engine and ordered "dead slow ahead", "rudder hard to port" and "bow thruster full to port" in order to be able to pass the stern of MT AIMISI on its port side.

At the same time the pilot had notified Port Control of the collision.

Since due to the very narrow navigation channel there were no opportunities for anchoring at once, the vessel continued its voyage to the Commodore Channel. At 21.21 h the Master ascertained that the CMV IVORY STAR I was very rapidly listing to port, indicating water intake on the port side. He then immediately ordered the Chief Mate and Second Mate, a seaman and the ship's mechanic to check all compartments. After 20 minutes the Second Mate had reported that there was no water in the checked holds and forecastle, but that flooding noises could be heard from ballast tank No. 1. At 21.41 h the Master thereupon instructed the Chief Engineer to pump ballast into starboard tank No. 1 in order to minimise the angle of list.

At 22.12 h the vessel anchored in the Commodore Channel.

Within the framework of questioning by the Federal Bureau of Maritime Casualty Investigation (BSU) the Captain stressed once again that he had not been informed by the pilot of either the vessel AIMISI at anchorage or of the unlit pontoon impeding the free passage through the navigation channel. The pilot had repeatedly assured the Master that he, the pilot, had himself not had any information about the obstacles in question on and in the navigation channel. Shortly after the accident the pilot suffered a nervous breakdown on the bridge of CMV IVORY STAR I and could no longer be addressed.

4.1.2. Statement by the Chief Mate

In his report the Chief Mate fully confirmed the content of the description of the course of the accident by the Master. In particular he confirmed that MT AIMISI was anchored in the navigation channel and thus represented an obstacle to safe departure. He further stated that the pilot had recommended passing the vessel at anchor on its starboard side. When the bow of CMV IVORY STAR I was just about to pass the stern of the anchoring vessel, the bosun had called an alarm from the forecastle and warned of a large dark object lying very close ahead. Although everything had been absolutely dark ahead from the bridge and there was not the slightest reflection of lighting evident, the Master had immediately switched the engine telegraph to "full astern".

The Master and the pilot had remained outside on the wing. The Chief Mate had perceived a very weak shock. Instructed by the Master he had gone to "half astern" and then after the bow of the vessel had evidently come free of the object, he had executed his Master's command "bow thruster full to port".

The vessel had now moved to port and astern. Finally the vessel had then passed MT AIMISI on its port side with "dead slow ahead" and continued the voyage to the anchorage in the Commodore Channel.

4.1.3. Statement by the helmsman

In his statement the helmsman pointed out that the pilot had been the one who gave him the rudder commands. Visibility had been good and he himself had had a clear view ahead. After a vessel with bright lights had come into view the pilot had instructed him to change course to starboard in order to have the said vessel anchored ahead on his port side. The helmsman could no longer remember the new course exactly but it would have been $\sim 111^\circ$. He had then heard the bosun's warning about a dark object directly ahead but had not been able to recognise anything. The Master had run outside in order to be able to see what was there. The Chief Mate had stood at the engine telegraph. After the rudder had been ordered hard to port they had finally passed the vessel lying at anchor on the starboard side.

4.1.4. Statement by the bosun

The bosun had experienced the collision on the forecastle and reported as follows:

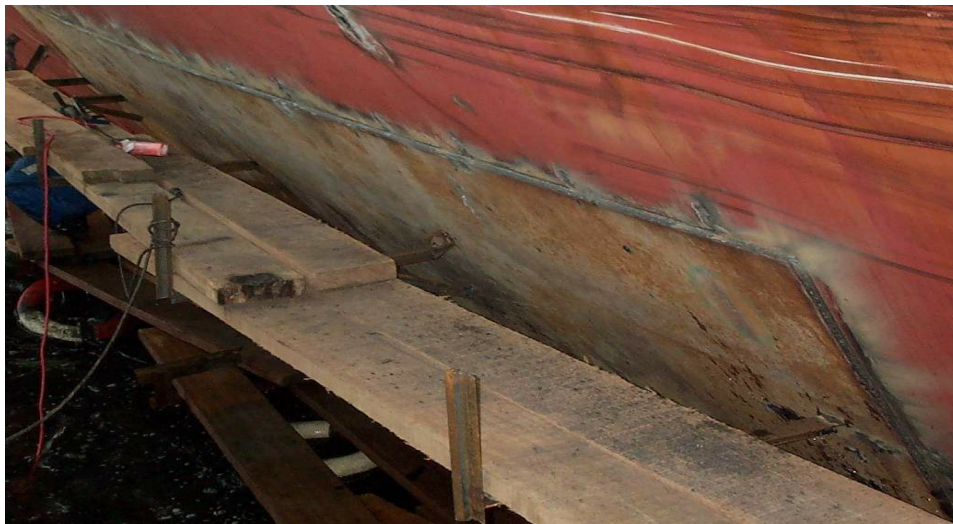
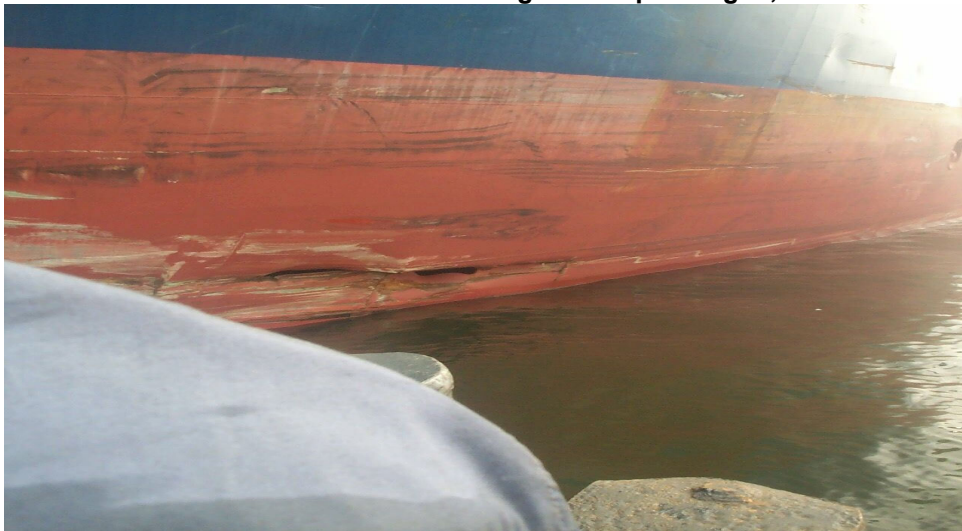
At the time of the accident he had been on station on the forecastle and the anchor had been at "standby" "ready to drop". Despite the darkness visibility had been good. Suddenly he had made out a dark, completely unlit object about 70 m ahead. Despite the complete darkness of the object he had been able to make out a crane on it. He had immediately reported his observation to the bridge before the collision occurred. Everything had happened very quickly. He had tried to protect himself and had called into the radio set: "We are colliding!".

Shortly after that the port side of the bow had collided with the floating crane.

5. Summary of damage/photos of damage

The damage to the hull of CMV IVORY STAR I is partly visible at the bottom on the photos. The bulwark on the port side of the forecastle was ripped over a length of 1.80 m. About 6 m above the keel line a crack 5 m long and 0.3 m wide occurred in the underwater part of the hull, stretching aft from frame 91.

M/V IVORY STAR I / Collision damage and repair Lagos, 02.06.2003



The barge EUROPA sank in the night of 2nd June 2003 due to a crack in the outer plating. The lifting device on the barge NUMAX was destroyed as a consequence of the sudden, one-sided pull load of the crane.

The salvage company that sustained the damage initially quantified the damage to the owner of IVORY STAR I as altogether US\$ 11.4 million.

The investigations by the BSU had to remain fragmentary since despite friendly efforts through the Embassy of the Federal Republic of Germany in Nigeria, Lagos Station, it was not possible to obtain any statements by the pilot about the course of the accident from the Nigerian port authority in Lagos. Nor was it possible to find out why the pilot or the port authorities in Lagos had not informed the Master of CMV IVORY STAR I about the partly unlit obstacles to shipping before the vessel left the port. Furthermore it was not possible to learn anything about the Motor Tanker AIMISI anchored in the very narrow navigation channel area. Because of the insurmountable difficulties described in obtaining information it was not possible to finally analyse the causes of the maritime casualty. That is why the publication of the Federal Bureau of Maritime Casualty Investigation (BSU) is restricted to this summary investigation report.

However, it should not remain unmentioned that the German vessel operator involved and in particular the Master of IVORY STAR I were ready at all times to make their contribution to clearing up the causes of the accident and in so far cooperated very well with the Federal Bureau of Maritime Casualty Investigation (BSU).

6 Sources

The photos attached to the summary maritime casualty investigation report were kindly made available by the operator of the container vessel.