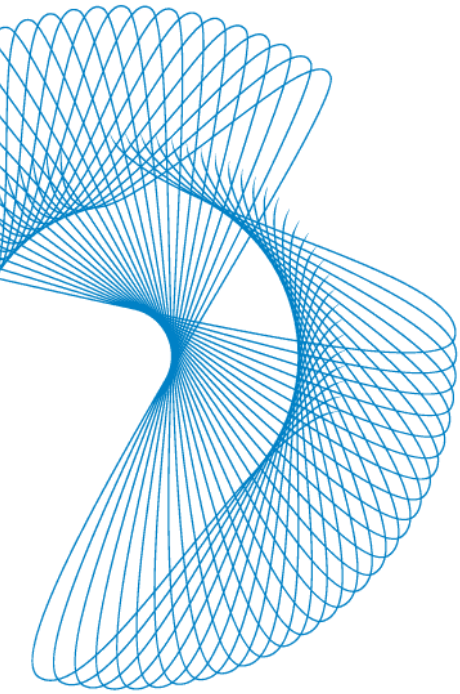
MARITIME NEW ZEALAND



Accident Report

San Constanzo

Flooding approximately 35 miles east of Gisborne on 18 January 2004

SUMMARY

Leaking seams in the vessel's wooden hull, allowed water to enter the vessel and flood the forward compartment and engine room. The vessel's pumping system was unable to cope with the rate of water ingress and it was only the use of a portable petrol driven pump, from another fishing vessel, that was able to stabilize the situation and reduce the water level. *San Constanzo* was towed back to port by the fishing vessel *Juliet*. The seams of the vessel's hull were subsequently re-caulked.

Key Events

1.1 On Sunday, 18 January 2004, at about 1600 hours New Zealand Daylight Time (NZDT), the fishing vessel *San Costanzo* sailed from Gisborne for the fishing grounds. On board was the Skipper with his two crewmembers. They made the first shoot at 2300 hours.

1.2 On 19 January, at about 2130 hours, *San Costanzo* was about 35 miles east of Gisborne. The Skipper and crew were retrieving the longline, when the Skipper heard the bilge alarm and the main engine overheat alarm sound at the same time in the wheelhouse.

1.3 The Skipper entered the engine room and found the bilge water was just above the floorboards. The main engine seawater pump drive belt was hitting the water and slipping on its wheels. The Skipper stopped the main engine and started a stand by seawater pump, to pump out the bilge water. However, the level of water in the bilge kept rising.

1.4 The Skipper was unable to find the source of the water ingress.

1.5 He called on the SSB radio to another fishing vessel, *Juliet*, where his father was operating about 30 miles away. He responded and immediately turned to help.

1.6 The Skipper called Maritime Radio on VHF Channel 16 and advised them of the situation.

1.7 When the water level reached the electrical junction box, located about 0.7 metres above the floorboards, both pumps were put out of action.

1.8 *Juliet* arrived at about 0130 hours on 20 January. A towing line was secured between the two vessels and they started the tow towards Gisborne.

1.9 At about 0530 hours, the water in the engine room was about 1.2 metres deep. Another fishing vessel brought a petrol driven pump from Gisborne. When the Skipper started this pump the water level immediately began to recede.

1.10 At about 0800 hours, *San Costanzo* was secured to a safe berth in Gisborne. By this time, the level of water in the engine room bilge had been reduced to a depth of about 0.5 metres.

Key Conditions

2.1 *San Costanzo*

2.1.1 *San Costanzo* is a wooden fishing boat built, in 1965.

2.1.2 Her gross tonnage is 27.

2.1.3 She has an length overall of 14.99 metres.

2.1.4 SGS M&I certified the vessel as fit for coastal longline fishing.

2.2 The Owner

2.2.1 The Owner/Skipper holds a New Zealand Coastal Master Certificate and a 2nd Class Diesel Trawler Engineer Certificate.

2.2.2 He has been a fisherman for over 20 years, including 5 years as Skipper on *San Costanzo.*

2.3 The Crew

2.3.1 Neither of the crew members had any maritime qualifications.

2.4 Sea and Weather Conditions

2.4.1 The wind speed was 20 to 25 knots from a North-North-East direction. The waves were 1-1.5 metres in height. There was no rain and very good visibility.

2.5 Safe Ship Certificate

2.5.1 The last Safe Ship Management (SSM) Certificate was issued on 16 August 2002 by M&I. It expired on 22 September 2003.

2.5.2 The *San Costanzo* was due for a bottom survey for the renewal of her SSM Certificate. The slipway in Gisborne was fully booked in the final quarter of 2003. The Skipper advised SGS M&I that the slipway was not available and asked to postpone the renewal inspection until December 2003.

2.5.3 The Skipper was unaware his vessel needed an Exemption Certificate from Maritime Safety Authority to operate for the period without a valid Safe Ship Management Certificate.

2.5.4 The bottom survey was completed and the renewal survey carried out on 11 December 2003. The issuance of a new SSM Certificate was pending at the time of this accident, awaiting the service of the liferaft and the adjustment of the main engine control cable.

2.5.5 The Skipper put a substitute liferaft onboard for the last voyage whilst his own liferaft was sent to Auckland for service.

2.5.6 The Skipper considered the main engine was safe to operate without adjusting the control cable. He intended to do it later, before the return of the liferaft.

2.6 The Bilge Pumping System

2.6.1 *San Costanzo* has a common bilge system. Water from the forward accommodation bilge, runs through the bulkhead openings and is collected in the engine room bilge.

2.6.2 There is an automatic, electrically driven, submersible bilge pump situated at the after end of the engine room, next to the main engine gearbox. This automatic bilge pump is started by a float switch when the level of the water in the bilge reaches a certain height. An amber alarm light is displayed on a dashboard on the bridge and this indicates that the bilge pump is running.

2.6.3 When the quantity of water ingress exceeds the capacity of the bilge pump, the bilge water level rises and actuates an audible alarm. This alerted the Skipper to the danger of the engine room flooding.

2.7 Bottom Inspection and Repairs Required

2.7.1 *San Costanzo* was put on the slipway for damage inspection after this accident.

2.7.2 There was no significant damage to the hull and the underwater parts.

2.7.3 Water flooded into the vessel through the seams of the hull planking.

2.7.4 *San Costanzo* had some of the underwater seams re - caulked on the slipway. SGS M&I issued a single voyage permit for the vessel to go to Tauranga for recaulking all the seams.

2.7.5 *San Costanzo* sailed for Tauranga on the 4 February 2004.

2.8 Failure to Report Accident

2.8.1 After advising Maritime Radio about this accident, the Skipper made no formal report to the Maritime Safety Authority, until the local Maritime Safety Inspector called him on 23 January 2004. After realising a report was required, he submitted one immediately.

2.8.2 In June 2003, *San Costanzo* had a section of her main engine exhaust pipe replaced by a piece of straight pipe without any expansion bellows. During the subsequent voyage, one of the welding joints cracked and the leaking exhaust gas got into the engine room. The Skipper diverted the vessel to Tauranga and replaced the defective pipe by a proper exhaust pipe with thermal expansion bellows. The Skipper considers this incident was minor and did not affect the safety of anyone onboard.

2.9 Hull Maintenance

2.9.1 The ship's bottom was recently inspected. All bottom parts of the hull were found to be in order. No caulking was required at that time.

2.9.2 There was no record of any previous caulking of the hull in the last 5 years.

Contributing Factors

N.B. These are not listed in order of importance.

3.1 It is a common occurrence for wooden hull vessels to have water ingress through caulked seams. This can only be prevented by regular inspection of the hull and recaulking the seams as required. This did not occur here.

3.2 *San Costanzo* had very little water in the bilge during the previous voyages. The Skipper and his crew did not expect to see so much water coming through the hull seams.

3.3 The Skipper and his crew had been retrieving the longline on deck since noon. –For this reason, no one was aware for how long the bilge pump had been running.

3.4 The high-level bilge alarm was fitted too high and hence was unable to prevent the main engine belts from slipping, when in contact with the water.

3.5 A petrol driven pump, brought from Gisborne, ensured the vessel remained afloat during the return voyage.

3.6 The Skipper believed the failure of the caulking might be due to the vessel striking an unknown object. However, during that particular voyage none of the crew onboard could recall any impact or any serious vibration.

CAUSE

Human Factor

❑ Failure to comply with regulations	❑ Drugs & Alcohol	❑ Overloading
❑ Failure to obtain ships position or course	❑ Fatigue	❑ Physiological
❑ Improper watchkeeping or lookout	❑ Lack of knowledge	❑ Ship Handling
❑ Misconduct/Negligence	❑ Error of judgement	❑ Other . . .

Environmental Factor

❑ Adverse weather	❑ Debris	❑ Ice	❑ Navigation hazard
❑ Adverse current	❑ Submerged object	❑ Lightning	❑ Other . . .

Technical Factor

✗ Structural failure	❑ Wear & tear	❑ Steering failure
❑ Mechanical failure	❑ Improper welding	❑ Inadequate firefighting/lifesaving
❑ Electrical failure	❑ Inadequate maintenance	❑ Insufficient fuel
❑ Corrosion	❑ Inadequate stability	❑ Other . . .

4.1 The vessel flooded due to water ingress through leaking seams in the hull.

Opinions & Recommendations

5.1 That the owners of the vessel reduce the height of the high bilge level alarm above the hull to protect the engine driven belts.

5.2 That the owners restore the water tightness of the hull before putting this vessel back into service. *This has since been rectified.*

5.3 The Chief Accident Investigator to issue a warning letter to the Skipper for failing to report this flooding accident.

5.4 The Chief Accident Investigator to issue a warning letter to the Skipper for his failure to obtain an Exemption Certificate from the Maritime Safety Authority when operating *San Costanzo*, after the expiry of the Safe Ship Management Certificate.