



Accident Report
Anzac Orient
Cargo Loss en route to Tauranga
on 5 February 2004



REPORT NO.: 04 3395
VESSEL NAME: *ANSAC ORIENT*

Casualty Details:

Date of Casualty: 5 February 2004
Time of Casualty: 0200 hours New Zealand Daylight Time (NZDT)
Casualty Type: Cargo Loss
Casualty Location: En route to Tauranga
Weather Forecast Area: Portland
Investigator: Ian Clarke, MSI, Tauranga



REPORT NO.: 04 3395

VESSEL NAME: *ANSAC ORIENT*

Vessel Details:

Ship Name: *Ansac Orient*

Ship Category: Bulk Carrier

Registered Length (m): 169.03

Gross Tonnage: 16 715

Net Tonnage: 39 263

Flag: Panama



SUMMARY

Ansac Orient encountered a swell on its starboard bow and rolled violently. Short logs fell from the after end of No. 3 hatch allowing the lashings to slacken. Cargo then shifted athwartships, bending portable log stanchions abreast of No. 3 hatch. About 45 logs were lost overboard.



Key Events

- 1.1 On 1 February 2004, at 0720 hours New Zealand Daylight Time (NZDT), ***Ansac Orient*** arrived at Gisborne to load a cargo of logs.
- 1.2 On 2 February 2004, at 0125 hours, ***Ansac Orient*** left Gisborne for Napier with a part cargo of logs in its holds.
- 1.3 At 1015 hours, ***Ansac Orient*** arrived at Napier, where it continued to load logs. Logs were loaded into all holds and on hatches Nos 3 and 5.
- 1.4 On 4 February, at 0430 hours, loading of cargo was completed. The ship left port at 0555 hours.
- 1.5 At 0640 hours, ***Ansac Orient*** anchored outside the port of Napier for its crew to secure deck cargo.
- 1.6 Lashing began at 0720 hours and was completed by 1030 hours. At 1050 hours, after weighing anchor, the ship sailed for Tauranga. Course was set at 086°(T), and the speed 13 knots.
- 1.7 At the end of each four-hour watch, the Deck Officer relieved from the bridge, made a tour of inspection and noted in the log book that all was well.
- 1.8 At 1430 hours, in position 39° 20'.9 S 177° 57'.0 E, course was altered to 024°(T).
- 1.9 At 1550 hours, in position 39° 06'.9 S 178° 05'.2 E, course was altered to 019°(T).
- 1.10 At 2300 hours, course was altered to 315°(T).
- 1.11 On 5 February, at 0130 hours, course was altered to 300°T. At 0140 hours, the Master went below. The ship was rolling, at times to 20° to each side, but not pitching heavily.
- 1.12 At 0200 hours, the 2nd Officer called the Master to report that logs had fallen onto the deck from the after end of No 3 hatch. The ship was in position 37° 25' S 178° 06' E.
- 1.13 Using a searchlight, the Master and officers tried to assess what had taken place on deck. As well as the logs that had fallen from No. 3 hatch, they saw that cargo had shifted athwartships and bent the stanchions outward on both sides of the ship. It was later estimated that about 45 logs were lost overboard.
- 1.14 At 0430 hours, the Master tried to alter course to 265°(T) to head for Tauranga, but as the swell came broader on its beam, the ship rolled violently and he had to turn back to the original course.
- 1.15 ***Ansac Orient*** continued to head 300°(T), making a speed of about 10.5 knots. At 0930 hours, in position 37° 07'.0 S 176° 30'.0 E, course was altered to 220°(T), towards Tauranga.
- 1.16 At 1100 hours, ***Ansac Orient*** arrived at the pilot station off Tauranga.
- 1.17 At 1150 hours, the Pilot boarded and the vessel proceeded into the harbour.
- 1.18 At 1400 hours, ***Ansac Orient*** was all-fast port side to No. 9 berth, Mount Maunganui.



Key Conditions

2.1 ***Ansac Orient*** was a bulk carrier with the following particulars:

Port of registry:	Panama
IMO number:	9115092
Year of build:	1995
Overall length:	169.03 m
Breadth:	27.20 m
Depth:	13.60 m
Gross tonnage:	16 715
Service speed:	14 knots

2.2 The ship was owned by IMA Lines Co. Ltd and managed by Imabari Senpaku Co. Ltd of Japan. It was under time charter to Sanko Steamship Co Ltd and sub-chartered on a voyage charter to Trans Pacific Carriers of Seoul, Korea.

2.3 ***Ansac Orient*** had an International Safety Management Certificate issued by Nippon Kaiji Kyokai on 21 June 2002, which was due to expire on 30 July 2007.

2.4 Between 13 and 16 December 2003, ***Ansac Orient*** loaded a full cargo of logs at Nelson and Picton. The cargo was discharged in Korea and Japan before the ship returned to New Zealand.

2.5 The deck crew were:

Bosun, 3 Able Seamen, an Ordinary Seaman and a General Purpose Rating. The 2nd Officer, Bosun and 2 Able Seamen joined the ship in January 2004. The Master, Chief Officer, 3rd Officer and remaining seamen had sailed on the voyage to New Zealand in December, so had secured timber deck cargo before on ***Ansac Orient***. The Master said that the previous deck cargo consisted of long logs, which did not present the same difficulties for securing as were experienced with the short logs. The ship had not carried timber cargoes between January and December 2003.



2.6 ***Ansac Orient's*** Cargo Securing Manual was approved by Class NK on 15 August 1997. It included a Log Loading Plan provided by Imabari Shipbuilding Co. The plan was for a full deck cargo of logs and did not address partial loading conditions.

2.7 Deck cargo on No. 3 hatch was secured with 7 chain lashings, supplemented by overall wire lashings. Hog lashings had been rigged but wiggle wires were not used.

2.8 The Master held a Certificate of Competency as Master issued by the Government of Korea, that was due to expire on 27 August 2004, and a Licence as Master issued by Panama on 27 August 2003 and due to expire on 27 August 2004. He first went to sea in 1975 and had served on log ships as Chief Officer from 1984 to 1986. He had been Master for 12 years and joined ***Ansac Orient*** on 6 October 2003. He had not previously sailed as Master on ships carrying timber deck cargo.

2.9 Cargo was to be loaded in Gisborne, Napier and Tauranga, for discharge in Kunsan and Inchon. On leaving Napier, holds Nos. 1, 3 and 5 were full and No. 2 and 4 holds were partially loaded. Logs were carried on hatch No. 3 to a height of about 4.5 m at the sides, crowned to 5m, and on hatch No. 5 to about 3.0m. No 2 double bottom tanks and No 2 and 3 topside tanks were full of water ballast. Fuel oil was carried in No. 2 and 3 centre tanks.

2.10 The weights used in calculating the departure condition in *Appendix 4* are summarised below. The figures for cargo in holds and on deck did not correspond with those provided by the loading master, which are also shown below, alongside in brackets:

Cargo in holds:	14107 tonnes	(14812 tonnes)
Cargo on deck:	1610 tonnes	(2083 tonnes)
Water ballast in double bottom tanks:	1330.4 tonnes	
Water ballast in topside tanks:	1675.4 tonnes	
Fuel and diesel oil:	510 tonnes	
Fresh water:	240 tonnes	
Deadweight constant:	350.0 tonnes	
Deadweight:	19822.7 tonnes	
Displacement:	25886.7 tonnes	

2.11 The drafts leaving Napier were:

Forward	6.90 m
Aft	8.90 m

2.12 On departure from Napier, the Metacentric height (GM) was 3.38m. At mean draft of 7.90m, a minimum acceptable GM of 2.36m was prescribed in the loading manual.

2.13 The loading manual provided formulae and constants for calculating the period of roll. At a draft of 7.90 m, the radius of gyration (K) was given by formula:

$$(K / B)^2 = 0.135$$

The formula $T = 2.01 \times K / \sqrt{GM}$ gave a period of roll (T) of 10.9 s.

The Master said that the actual period of roll was longer than 15 s.

2.14 Weather recorded in the log book during the passage:

Time (hours)	Wind	Force	Remarks
Date – 4 February 2004			
1200	NE	4	Moderate breeze, cloudy, mod sea, good visibility
1600	NNE	4	Moderate breeze, rainy, moderate sea
2000	NE	4	Moderate breeze, rainy, mod sea, mod visibility
2400	W	6	Strong breeze, cloudy, very rough sea, good visibility
Date – 5 February 2004			
0400	WSW	6	Strong breeze, cloudy, ship rolling heavily with long beam swell from NNW, very rough sea
0800	SW	6	Fresh breeze, cloudy, rough sea
1200	SW	4	

2.15 A weather message was received before *Ansac Orient* left Napier.



Contributing Factors

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

- 3.1 Short logs were carried on No. 3 hatch.
- 3.2 Apart from the overall (athwartships) lashings, there was nothing to restrain the logs in the fore and aft direction.
- 3.3 With a GM of 3.38m, the ship was very stiff and had a short period of roll.
- 3.4 The ship was trimmed 2.0m by the stern.
- 3.5 No. 2 double bottom tanks were full of water ballast.

Cause

Human Factor

<input type="checkbox"/> Failure to comply with regulations	<input type="checkbox"/> Drugs & Alcohol	<input type="checkbox"/> Overloading
<input type="checkbox"/> Failure to obtain ships position or course	<input type="checkbox"/> Fatigue	<input type="checkbox"/> Physiological
<input type="checkbox"/> Improper watchkeeping or lookout	<input type="checkbox"/> Lack of knowledge	<input type="checkbox"/> Ship Handling
<input type="checkbox"/> Misconduct/Negligence	<input type="checkbox"/> Error of judgement	<input type="checkbox"/> Other . . .

Environmental Factor

<input checked="" type="checkbox"/> Adverse weather	<input type="checkbox"/> Debris	<input type="checkbox"/> Ice	<input type="checkbox"/> Navigation hazard
<input type="checkbox"/> Adverse current	<input type="checkbox"/> Submerged object	<input type="checkbox"/> Lightning	<input type="checkbox"/> Other . . .

Technical Factor

<input type="checkbox"/> Structural failure	<input type="checkbox"/> Wear & tear	<input type="checkbox"/> Steering failure
<input type="checkbox"/> Mechanical failure	<input type="checkbox"/> Improper welding	<input type="checkbox"/> Inadequate firefighting/lifesaving
<input type="checkbox"/> Electrical failure	<input type="checkbox"/> Inadequate maintenance	<input type="checkbox"/> Insufficient fuel
<input type="checkbox"/> Corrosion	<input type="checkbox"/> Inadequate stability	<input type="checkbox"/> Other . . .

- 4.1 ***Ansac Orient*** encountered a swell on its starboard bow and rolled violently. Short logs fell from the after end of No. 3 hatch, allowing the lashings to become slack. Cargo then shifted athwartships, bending portable log stanchions abreast of No. 3 hatch. About 45 logs were lost overboard.



Opinions & Recommendations

- 5.1 The decision to book a cargo with a large proportion of short logs to be loaded in 3 New Zealand ports for discharge in 2 ports overseas placed severe constraints on planning the stow. ***Ansac Orient*** left Napier in a stiff condition and trimmed 2m by the stern, with short logs on No. 3 and No. 5 hatches. Although the crew secured the cargo using sound lashing equipment, nothing was done to prevent logs from falling off the after end of No. 3 hatch. The ship was not fitted with inboard bridging stanchions or any other means to support vertical faces of timber and was not designed to accommodate deck cargo that would leave large gaps between hatches.
- 5.2 Under Maritime Rule 24 C, Section 3 – *Timber Deck Cargoes*, ***Ansac Orient*** was required to comply with the *IMO Code of Safe Practice for Ships Carrying Timber Deck Cargoes*. The Code required safe and satisfactory access at all times to areas used in the necessary working of the ship. The presence of a block of timber across the ship at No. 3 hatch prevented safe access to the fore part of the ship and therefore the vessel was not in compliance with Rule 24. Access for Pilots was provided beneath the deck cargo on No. 5 hatch on both sides, but there was no safe access to the top of the cargo for crew to inspect and adjust lashings.
- 5.3 It is recommended that the Maritime Safety Authority writes to the Master and Owners of ***Ansac Orient*** to advise them that at the time of departure from Napier the ship was in a dangerous condition and did not comply with the *IMO Code of Safe Practice for Ships Carrying Timber Deck Cargoes*. The letter should warn them that ships carrying timber deck cargoes may be detained if not compliant with the Code.
- 5.4 It is recommended that the Maritime Safety Authority writes to the organizations responsible for chartering ships for the carriage of timber deck cargoes, care of their New Zealand agents, to remind them of the duty of ships' owners and masters to comply with the *IMO Code of Safe Practice for Ships Carrying Timber Deck Cargoes*. The letter should warn them that ships with timber cargo on deck may be detained if not compliant with the Code.

