Australian Government

Australian Transport Safety Bureau

ATSB TRANSPORT SAFETY REPORT

Marine Occurrence Investigation No. 278

MO-2010-007

Final

Independent investigation into the loss of deck cargo from the Panama registered multipurpose cargo ship

Mimasaka

at sea, off New South Wales

4 October 2010

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Figure 2 is provided courtesy of Monson Shipping, Burnie. Wave data was provided by the New South Wales Office of Environment and Heritage and the New South Wales Public Work's Manly Hydraulics Laboratory.

On 4 October 2010, 604 packs of timber veneer were lost overboard from the deck of the Panama registered multipurpose cargo ship *Mimasaka*. At the time, the ship was in rough seas, about 27 miles southeast of Yamba, New South Wales.

The ATSB investigation found that the cargo stowage and securing instructions that had been emailed to the ship did not provide the crew with sufficient guidance about how the deck cargo was to be stowed or secured. Consequently, the deck cargo was not appropriately secured and it moved in the heavy weather. This resulted in the failure of the lashing system and the subsequent loss of the cargo.

The investigation also found that the ship's cargo securing manual did not contain any instructions on the stowage and securing of timber veneer cargoes. Furthermore, the operations manual provided by NYK-Hinode Line for the stowage and securing of timber veneer did not contain any information or guidance for the stowage and securing of the cargo on the ship's hatch covers.

The ATSB identified five safety issues during the investigation. They include the lack of guidance provided to the crew by NYK-Hinode Line, that the shipper of the veneer did not follow the recommendations for packaging contained in Appendix A of the International Maritime Organization's Code of Safe Practice for Ships Carrying Timber Deck Cargo and that no third party had inspected the packaging to see whether the shipper had followed those recommendations.

The ATSB acknowledges the safety action taken by the organisations responsible for the safety issues and is satisfied that the safety action adequately addresses those safety issues.

THE AUSTRALIAN TRANSPORT SAFETY BUREAU

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The Bureau is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. The ATSB's function is to improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in: independent investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; fostering safety awareness, knowledge and action.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to fare-paying passenger operations.

The ATSB performs its functions in accordance with the provisions of the Transport Safety Investigation Act 2003 and Regulations and, where applicable, relevant international agreements.

Purpose of safety investigations

The object of a safety investigation is to identify and reduce safety-related risk. ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated. The terms the ATSB uses to refer to key safety and risk concepts are set out in the next section: Terminology Used in this Report.

It is not a function of the ATSB to apportion blame or determine liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

Developing safety action

Central to the ATSB's investigation of transport safety matters is the early identification of safety issues in the transport environment. The ATSB prefers to encourage the relevant organisation(s) to initiate proactive safety action that addresses safety issues. Nevertheless, the ATSB may use its power to make a formal safety recommendation either during or at the end of an investigation, depending on the level of risk associated with a safety issue and the extent of corrective action undertaken by the relevant organisation.

When safety recommendations are issued, they focus on clearly describing the safety issue of concern, rather than providing instructions or opinions on a preferred method of corrective action. As with equivalent overseas organisations, the ATSB has no power to enforce the implementation of its recommendations. It is a matter for the body to which an ATSB recommendation is directed to assess the costs and benefits of any particular means of addressing a safety issue.

When the ATSB issues a safety recommendation to a person, organisation or agency, they must provide a written response within 90 days. That response must indicate whether they accept the recommendation, any reasons for not accepting part or all of the recommendation, and details of any proposed safety action to give effect to the recommendation.

The ATSB can also issue safety advisory notices suggesting that an organisation or an industry sector consider a safety issue and take action where it believes it appropriate. There is no requirement for a formal response to an advisory notice, although the ATSB will publish any response it receives.

TERMINOLOGY USED IN THIS REPORT

Occurrence: accident or incident.

Safety factor: an event or condition that increases safety risk. In other words, it is something that, if it occurred in the future, would increase the likelihood of an occurrence, and/or the severity of the adverse consequences associated with an occurrence. Safety factors include the occurrence events (e.g. engine failure, signal passed at danger, grounding), individual actions (e.g. errors and violations), local conditions, current risk controls and organisational influences.

Contributing safety factor: a safety factor that, had it not occurred or existed at the time of an occurrence, then either: (a) the occurrence would probably not have occurred; or (b) the adverse consequences associated with the occurrence would probably not have occurred or have been as serious, or (c) another contributing safety factor would probably not have occurred or existed.

Other safety factor: a safety factor identified during an occurrence investigation which did not meet the definition of contributing safety factor but was still considered to be important to communicate in an investigation report in the interests of improved transport safety.

Other key finding: any finding, other than that associated with safety factors, considered important to include in an investigation report. Such findings may resolve ambiguity or controversy, describe possible scenarios or safety factors when firm safety factor findings were not able to be made, or note events or conditions which 'saved the day' or played an important role in reducing the risk associated with an occurrence.

Safety issue: a safety factor that (a) can reasonably be regarded as having the potential to adversely affect the safety of future operations, and (b) is a characteristic of an organisation or a system, rather than a characteristic of a specific individual, or characteristic of an operational environment at a specific point in time.

Risk level: The ATSB's assessment of the risk level associated with a safety issue is noted in the Findings section of the investigation report. It reflects the risk level as it existed at the time of the occurrence. That risk level may subsequently have been reduced as a result of safety actions taken by individuals or organisations during the course of an investigation.

Safety issues are broadly classified in terms of their level of risk as follows:

- **Critical** safety issue: associated with an intolerable level of risk and generally leading to the immediate issue of a safety recommendation unless corrective safety action has already been taken.
- **Significant** safety issue: associated with a risk level regarded as acceptable only if it is kept as low as reasonably practicable. The ATSB may issue a safety recommendation or a safety advisory notice if it assesses that further safety action may be practicable.
- **Minor** safety issue: associated with a broadly acceptable level of risk, although the ATSB may sometimes issue a safety advisory notice.

Safety action: the steps taken or proposed to be taken by a person, organisation or agency in response to a safety issue.

EXECUTIVE SUMMARY

At 1054[1] on 27 September 2010, the Panama registered multipurpose ship *Mimasaka* berthed in the Tasmanian port of Burnie to load a cargo of timber veneer for shipment to Singapore. The cargo was to be loaded in the ship's holds and on its hatch covers.

By 0400 on 1 October, stowing and securing of the cargo had been completed. At 0600, a Burnie harbour pilot boarded the ship and at 0612, the last of its mooring lines was let go. At 0625, the pilot disembarked and the ship began its voyage to Singapore, via Australia's east coast.

As the ship made its way up the New South Wales coast, the weather and sea conditions deteriorated. This resulted in the ship rolling moderately with seas being shipped occasionally over its bow and main deck.

At 0855 on 4 October 2010, when the ship was about 27 miles[2] southeast of the port of Yamba, the ship rolled heavily to starboard and about 600 packs of timber veneer were lost overboard when the lashing system failed. This resulted in the ship developing a reported 20° starboard list.

The master made a very high frequency (VHF) radio distress call on channel 16 but the distress was cancelled about 2 hours later after the ship had been brought upright by the chief mate filling two port side water ballast tanks.

The master maintained the ship's course during this period as he believed the ship could continue on its voyage without any assistance. However, at about 1300, the ship rolled heavily to port and the remaining unsecured deck cargo slid back to port. This resulted in a list to port. This was corrected by the removal of the water ballast which had been put in to correct the starboard list.

Following the roll to port, *Mimasaka*'s master decided that the ship could not continue on its voyage and altered course for Yamba, where it anchored at about 1600.

While in Yamba, the remaining deck cargo was resecured by shore labour and by 1530 on 8 October, *Mimasaka* was underway for Brisbane, Queensland, where all the cargo could be checked and resecured as necessary. By 1100 on 12 October, the ship was berthed at the Queensland Bulk Terminal wharf in Brisbane.

The ATSB investigation found that the cargo stowage and securing instructions that had been emailed to the ship did not provide the crew with sufficient guidance about how the deck cargo should be stowed or secured. Consequently, the deck cargo was not appropriately secured and it moved in the heavy weather. This resulted in the failure of the lashing system and the subsequent loss of the cargo.

The investigation also found that the ship's cargo securing manual did not contain any instructions on the stowage and securing of timber veneer cargoes. Furthermore, the operations manual provided by NYK-Hinode Line for the stowage and securing of timber veneer did not contain any information or guidance for the

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[1] All times referred to in this report are local time, Coordinated Universal Time (UTC) + 10 and + 11 hours.

[2] A nautical mile of 1852 m.

stowage and securing of the cargo on the ship's hatch covers and that, despite the instructions email to the ship, *Mimasaka*'s crew did not consult international guidelines carried on board when they determined how to secure the deck cargo.

The ATSB identified five safety issues during the investigation. They include the lack of guidance provided to the crew by NYK-Hinode Line, that the shipper of the veneer did not follow the recommendations for packaging contained in Appendix A of the International Maritime Organization's Code of Safe Practice for Ships Carrying Timber Deck Cargo and that no third party had inspected the packaging to see whether the shipper had followed those recommendations.

The ATSB acknowledges the safety action taken by the organisations responsible for the safety issues and is satisfied that the safety action adequately addresses the identified safety issues.

1 FACTUAL INFORMATION

1.1 *Mimasaka*

Mimasaka is a multipurpose cargo ship which was built in 2010 by Higaki Shipbuilding, Japan (Figure 1). It is 127.7 m long, has a beam of 19.6 m and a deadweight of 14,061 tonnes at its summer draught of 9.465 m.

Figure 1: *Mimasaka* arriving in Brisbane

Propulsive power is provided by a MAN-B&W 6S35MC two-stroke, single acting, in-line diesel engine that delivers 4,440 kW. The main engine drives a single, fixed pitch propeller which gives the ship a service speed of about 13 knots[3].

The ship has three cargo holds located forward of the accommodation which are accessed through hatch covers on the upper deck. Cargo can be stowed in the lower holds, on the tween decks and on the hatch covers. The ship has two 50 tonne cargo cranes mounted on its port side.

Mimasaka's navigation bridge was equipped with navigational equipment consistent with SOLAS[4] requirements.

At the time of the incident, *Mimasaka* was owned by Mimasaka Investments, Panama, and managed by Well Shipmanagement and Maritime, Taiwan. It was registered in Panama, chartered to NYK-Hinode Line, Japan, and classed with Bureau Veritas (BV).

Mimasaka's crew comprised 18 Indonesian nationals. All the crew were appropriately qualified to sail on board the ship. While at sea, the three mates maintained a traditional 4 hours on/8 hours off watchkeeping routine.

The master had about 32 years of seagoing experience and obtained a class one certificate of competency in 1987. He had sailed on a number of different ship types, including 7 years on board ships which carried logs. He joined *Mimasaka* for the first time on 3 June 2010, in Oita, Japan. This was his first voyage to Australia.

The chief mate graduated from an Indonesian maritime academy in 1992. He had been sailing as chief mate since late 2005 and obtained a class two certificate of competency in 2009. He joined *Mimasaka* on 24 September 2010, in Geelong,

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[3] One knot, or one nautical mile per hour equals 1.852 km/hr.

[4] The International Convention for the Safety of Life at Sea, 1974, as amended.

Victoria. This was his first time on board the ship and he had also not been to Australia before.

The third mate, the officer on watch at the time the cargo was lost, had 7 years of seagoing experience. He obtained a class three certificate of competency in October 2008. He had sailed on several different ship types in the Indonesian coastal trade. He joined *Mimasaka* for the first time on 14 June 2010.

1.2 The incident

At 0518[5] on 26 September 2010, *Mimasaka* anchored off the Tasmanian port of Burnie, where it was due to load a cargo of timber veneer for shipment to Singapore. The ship was on its first voyage to Australia and had previously discharged steel products from Japan in the ports of Brisbane, Newcastle and Geelong.

At 1008 on 27 September, a Burnie harbour pilot boarded *Mimasaka* and by 1054, the ship was all fast alongside its berth. Loading of the timber veneer cargo started shortly afterwards.

The packs of veneer had been delivered to the wharf by the shipper, wrapped in two types of plastic: 25 micron ‘remill’ (with some recycled content) and 20 micron ‘full virgin’ (with no recycled content) (Figure 2). The packs varied in length between 1,900 mm and 2,350 mm and between 990 mm and 1,080 mm in width. They ranged in height from 890 mm to 1,220 mm.

Figure 2: Timber veneer packs awaiting loading at Burnie

5 All times referred to in this report are local time, Coordinated Universal Time (UTC) + 10 and + 11 hours.

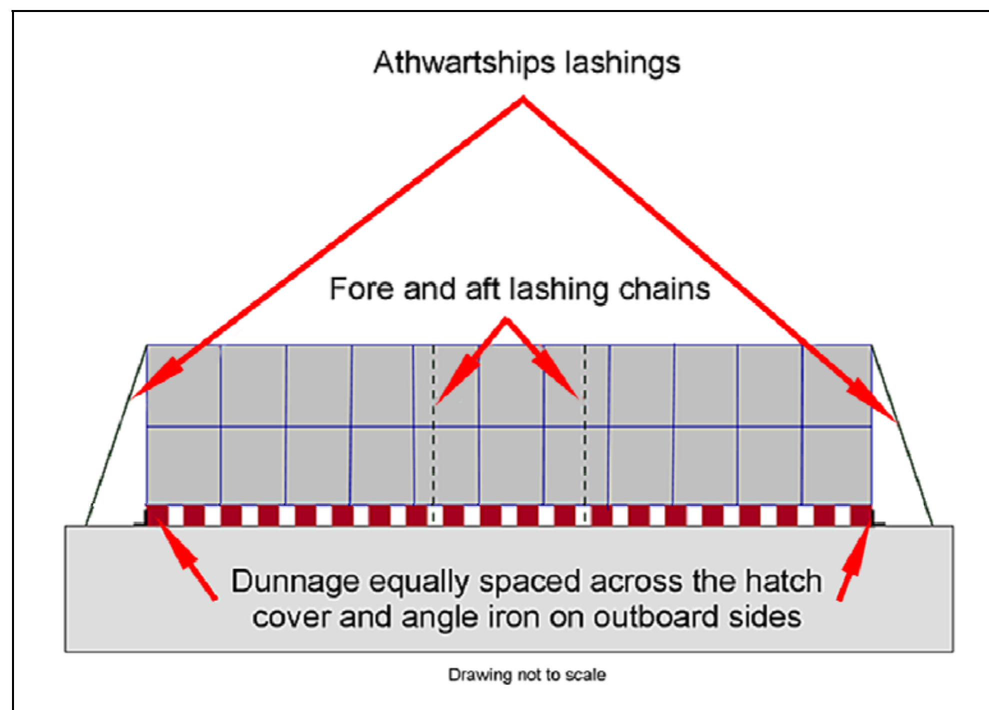
Loading into the ship's holds and on its hatch covers continued for the next 3 days. At 2330 on 30 September, cargo loading was completed. The ship was on an even keel of 10 m and its departure GM[6] was 0.36 m.

Final loading figures showed that *Mimasaka* had loaded a total of 8,750 packs of timber veneer, including 848 packs that had been stowed on top of the three hatch covers.

By 0400 on 1 October, the ship's crew had completed securing the deck cargo, using equipment that had been supplied in Japan by the ship's charterer. The equipment consisted of 3 m lengths of 90 mm x 90 mm timber dunnage, lashing chains, lever tensioners, 300 mm lengths of 100 mm angle iron (10 mm thick) and 'D' rings.

The veneer packs had been loaded fore and aft, two high on the hatch covers, with the bottom level (tier) sitting on the dunnage (Figure 3). The lengths of angle iron were welded on the outboard side of the hatch covers to prevent the outermost piece of dunnage from sliding further outboard.

Figure 3: *Mimasaka*'s deck stowage and securing arrangement on departure Burnie



Two lengths of lashing chain, made up of a number of smaller lengths, ran fore and aft over the veneer (coloured blue in Figure 4). These lengths of chain were secured to 'D' rings located at the forward and after end of each hatch cover.

After making up the fore and aft chains lengths, there were not enough chains left to enable athwartships lashings. To overcome this, the crew used a combination of the remaining chains and webbing straps with ratchets (which were already on board). Two lashings ran over each set of veneer packs and these were secured to the fore and aft chain lengths (coloured red in Figure 4). These lashings were secured to 'D'

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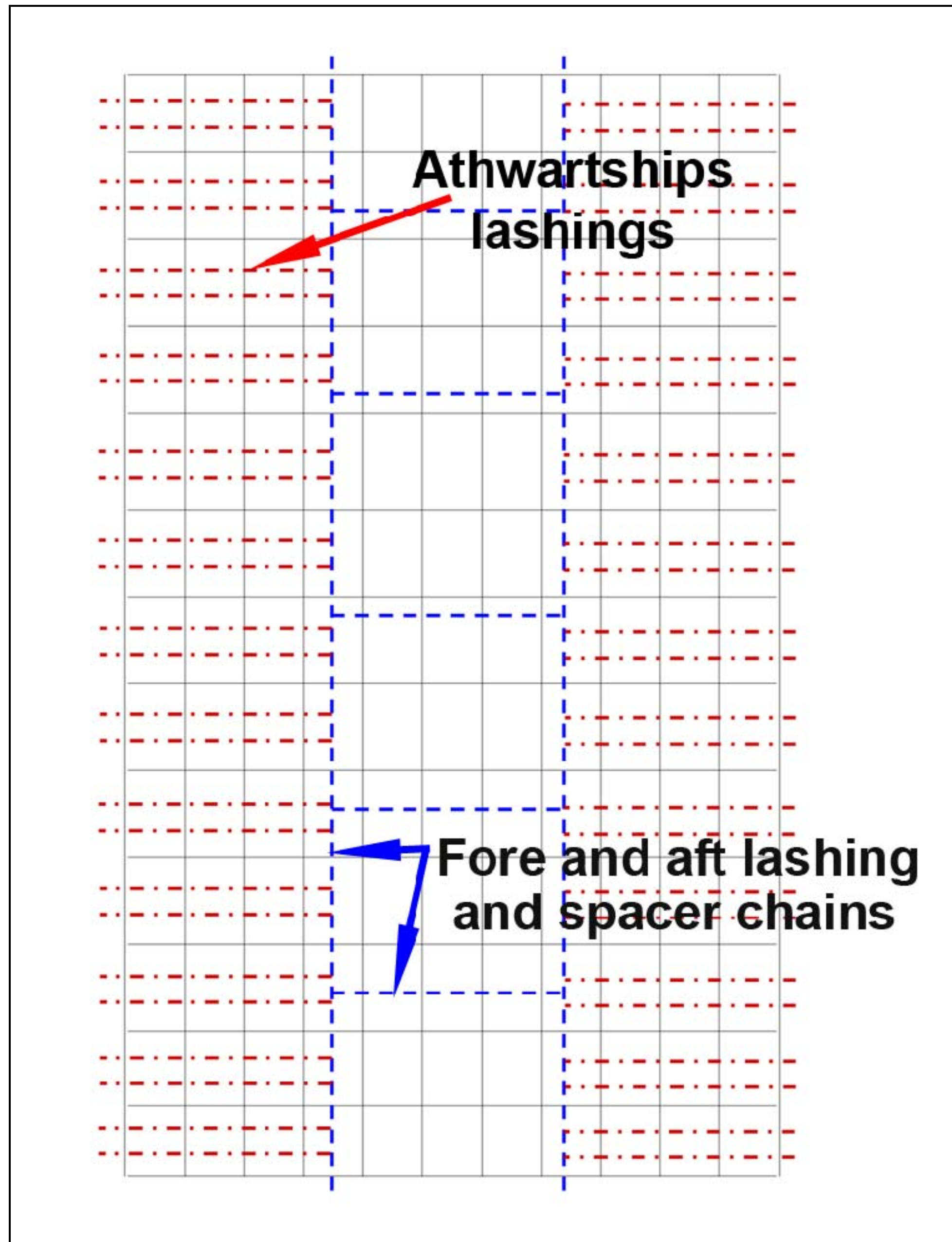
[6] Metacentric height – one of the critical measurements of a ship's stability.

rings, which had been welded on the outboard side of the hatch covers by ship's staff.

On number two and three hatch covers, webbing straps alone were secured to the fore and aft chain lengths and then to 'D' rings.

On each stow of cargo on the hatch covers, several smaller lengths of chain ran between the two fore and aft chains to prevent them from being pulled outboard by the athwartships lashings.

Figure 4: Plan view of *Mimasaka*'s securing arrangement



At 0600, a Burnie harbour pilot boarded the ship for its departure. At 0612, the last mooring line was let go and *Mimasaka* proceeded out of the port. At 0625, the pilot disembarked and the ship began its voyage to Singapore, via Australia's east coast.

By 1200, the ship was to the west of Flinders Island, in Bass Strait. The wind was recorded in the ship's bridge log book as being from the northwest at force[7] 3, the barometer was reading 1026 hPa and the ship was moving easily on a 1 m swell. The ship was making good a course of 038° (T) and a speed of 12.7 knots.

By 1200 on 2 October, the ship was in position 36° 16.55'S 150° 51.31'E, to the east of Montague Island, off the south coast of New South Wales (NSW). The wind was recorded as northerly at an estimated force 4, the barometer was 1029 hPa and the ship was moving easily on a 1-2 m swell. The ship was making good a course of 026° (T) and a speed of 12.5 knots.

By 1200 on 3 October, the ship was in position 32° 27.76'S 152° 51.86'E, to the east of Sugarloaf Point, NSW. The wind was now from the northeast at an estimated force 4/5 and the ship was rolling and pitching moderately in the 2-3 m swell. The barometer was reading 1027 hPa. The ship was now making good a course of 018° (T) and its speed had dropped to 7.3 knots.

By midnight, *Mimasaka* was in position 31° 02.11'S 153° 19.45'E, about 14 miles[8] east-southeast of Smokey Cape.

At 0800 on 4 October, in position 29° 52.8'S 153° 40.4'E, the wind was easterly at an estimated force 5/6[9] and the swell was estimated to be 3-4 m. The barometer had fallen to 1018 hPa. The ship was still rolling and pitching moderately and seas were continuing to be shipped over the forecastle and deck cargo. The ship was making good a course of 015° (T) at a speed of 9.5 knots.

Shortly after 0800, the chief mate handed over the watch to the third mate. However, just after the chief mate left the bridge, the weather deteriorated markedly and visibility fell to about 100 m as the ship entered heavy rain.

At 0815, the master, who had been in his cabin, came to the bridge and, because of the reduced visibility, took over the conduct of the ship.

After having his breakfast, the chief mate went to his cabin. At about 0850, as he was looking out his forward facing cabin windows, he saw the deck cargo on number three hatch cover move about 2 m to port as the ship rolled to port. He immediately rang the master and passed this information on to him.

Five minutes later, in position 29° 46.50'S 153° 42.82'E, 27 miles southeast of Yamba[10] (Figure 5), *Mimasaka* rolled heavily to starboard. When it did so, almost the entire deck cargo on hatch covers two and three slid to starboard and fell over the ship's side. The cargo that remained had slid over to the starboard side of the hatch covers, giving the ship a list to starboard of about 20°[11].

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7 The Beaufort scale of wind force, developed in 1805 by Admiral Sir Francis Beaufort, enables sailors to estimate wind speeds through visual observations of sea states.

8 A nautical mile of 1852 m.

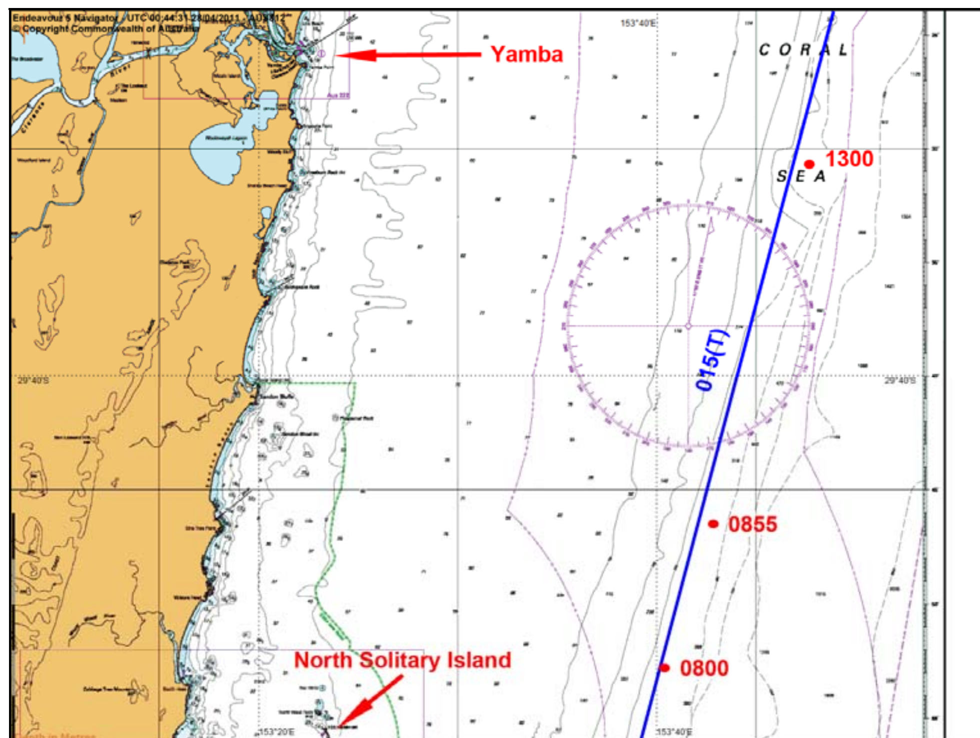
9 A maximum wind speed of 35 knots was recorded at the Yamba pilot station at 0700 on 4 October (force 8), direction was south-easterly.

10 A small NSW port, about 285 miles north-northeast of Sydney, situated at the mouth of the Clarence River.

11 As measured on the bridge inclinometer.

The master immediately sounded the ship's muster alarm and reduced the main engine to slow ahead. He also looked for a place to take refuge but there were none in the ship's vicinity. Consequently, the master maintained the ship's 015° (T) course.

Figure 5: Section of navigational chart AUS 812 showing location of loss



Just after 0900, the master made a distress call on very high frequency (VHF) radio channel 16, alerting anyone listening to the fact that the ship was in heavy weather and requesting assistance because of the loss of cargo and subsequent list. The call was acknowledged by the volunteer marine rescue (VMR) unit at Coffs Harbour, who passed the information to the Rescue Coordination Centre (RCC) in Canberra.

Meanwhile, the chief mate began preparations to see if the ship could be brought upright using water ballast. He began to fill number two and three port side water ballast tanks.

When told of the incident, the RCC tasked a rescue helicopter and two fixed wing aircraft to respond. A merchant ship in the vicinity was also asked to divert to *Mimasaka*'s position and the Sydney water police tasked a police vessel from Coffs Harbour.

By 1055, the ballasting had been successful and *Mimasaka* was upright. The seas were still rough and it was decided that the crew should not go on deck to resecure the remaining deck cargo until the weather and sea conditions abated.

The master decided that the ship could proceed on its planned passage so he returned the main engine to full ahead. He then contacted the Coffs Harbour VMR unit, telling them that the situation was now in hand and that assistance was no longer required. This information was passed on to the RCC and the RCC ceased further response action.

As *Mimasaka* continued on its 015° (T) course, the weather deteriorated further. By 1200, the barometer had fallen to 1012 HPa, the wind, still recorded as being from the east, recorded as increasing to force 7 or 8 and the ship continued to roll in the rough seas and swell[12].

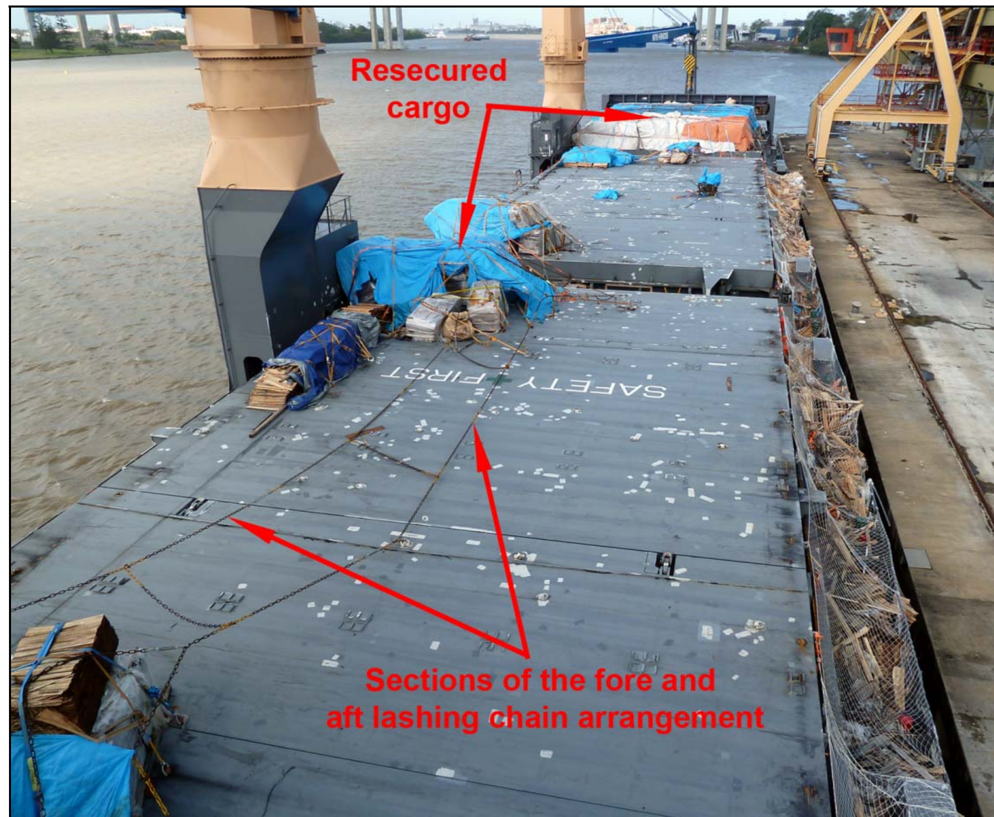
At 1300, in position 29° 30.78'S 153° 47.65'E, the ship rolled heavily to port and the unsecured cargo on the hatch covers slid back to port. The cargo on number one hatch cover also moved to port and three packs of veneer fell overboard.

The cargo shift resulted in the ship now listing about 10° to 15° to port. To bring the ship upright again, the chief mate began pumping out the water he had previously put into number two and three port side tanks.

At 1330, the master decided that the ship could not proceed to Singapore in its present condition. He altered the ship's course to make for Yamba, now 23 miles to the west. At 1600, *Mimasaka* anchored off Yamba.

While at anchor, arrangements were put in place by NYK-Hinode Line for the ship to be supplied with additional lashing and securing equipment. This would enable the remaining deck cargo to be resecured so that the ship could proceed to Brisbane, Queensland, where more permanent arrangements could be made.

Figure 6: *Mimasaka*'s foredeck showing the lashings applied in Yamba



[12] At the Yamba pilot station, the wind speed and direction was recorded to have been between 23 knots (south-south-easterly) at 0900 and 11 knots (easterly) at 1500 – force 6 reducing to force 4.

At 0630 on 7 October, stevedores boarded the ship and began to resecure the deck cargo (Figure 6). By 1400 on 8 October, this work was completed and by 1530, *Mimasaka* was underway for Brisbane.

At 1820 on 9 October, a Brisbane harbour pilot boarded *Mimasaka* for its passage to the Brisbane inner anchorage. By 2218, the ship was anchored and awaiting a berthing time.

On the morning of 12 October, a Brisbane harbour pilot boarded the ship for its passage to a layup berth in the Brisbane River. By 1100, *Mimasaka* was all fast starboard side to the Queensland Bulk Terminal wharf.

While at the Bulk Terminal wharf, the ship and its remaining cargo, both on deck and in its holds, was inspected to ensure that the ship would be able to continue its voyage. Between 15 and 25 October, following the inspections, AMSA detained the ship while on board documentation covering the stowage and securing of veneer cargoes were updated.

On 29 October, following the inspections and repair work carrier out on board, *Mimasaka* was moved to another berth in the Brisbane River and on the morning of 31 October, the ship departed Brisbane.

2 ANALYSIS

2.1 Evidence

On 12 October 2010, investigators from the Australian Transport Safety Bureau (ATSB) attended *Mimasaka* while it was berthed in Brisbane. The master, the chief mate and the third mate were interviewed and each gave their account of the incident. Copies of relevant documents were obtained, including log book entries and cargo records.

The ship's voyage data recorder (VDR) had not been backed up at the time of the incident and hence contained no information which was of assistance to the investigation

Further relevant information was later provided by NYK-Hinode Line, Ta Ann Tasmania and the Australian Maritime Safety Authority.

2.2 The incident

Mimasaka was a near-new ship and this was the first occasion that timber veneer had been loaded on board. It was also the first occasion that the master and chief mate had loaded a cargo of veneer. Consequently, they relied on instructions provided by the ship's charterer to assist them with the task of stowing and securing the cargo in Burnie.

However, the instructions did not provide the crew with sufficient guidance about how the deck cargo should be stowed or secured. As a result, the equipment provided to the ship was not used as intended and the packs of veneer on the hatch covers were not adequately secured.

In the heavy weather experienced on the morning of 4 October, the securing system failed and about three quarters of the deck cargo was lost overboard.

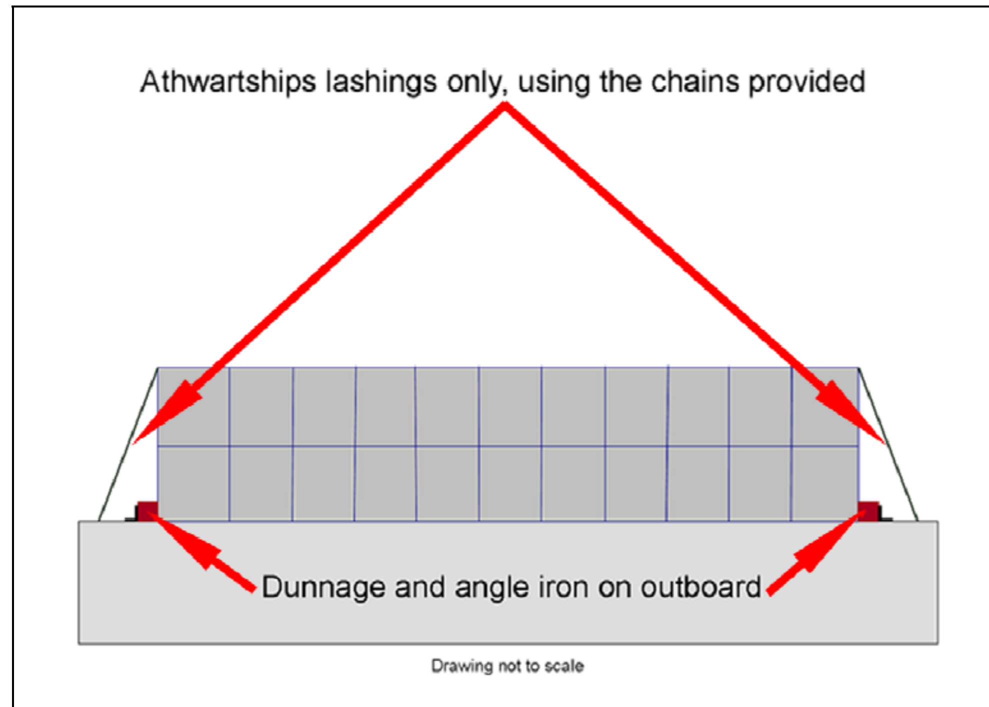
2.2.1 Use of the dunnage and angle iron

Based on the crew's understanding of the charterer's instructions for stowing and securing the packs of veneer on the hatch covers, the lengths of dunnage were placed fore and aft across the hatch covers and the packs of veneer loaded onto them. Lengths of angle iron were then welded on the outboard side of the lengths of dunnage (Figure 3).

However, the angle iron had little or no effect in stopping all the dunnage from moving. All it did was prevent the outboard pieces of dunnage from moving further outboard. The remainder of the dunnage was only held in place by the weight of the cargo, which would have varied considerably when the load was subjected to vertical accelerations of increasing magnitude in the deteriorating weather. As the tension was progressively lost in the lashing arrangement, there would have been increasing movement between the relatively smooth dunnage and the newly painted hatch covers. This would have, in turn, resulted in the entire cargo stow becoming less stable and subject to movement.

If the packs of veneer had been stowed as the charterer intended (section 2.3 of this report), they would have sat directly on the hatch covers, with the dunnage only on the outboard side of the packs to stop them from moving athwartships (Figure 7).

Figure 7: Intended use of the dunnage and angle iron



2.2.2 Use of lashings

After the packs of veneer had been loaded onto the dunnage on the hatch covers, the crew put the lashing chains and webbing straps over the stows of veneer on each of *Mimasaka*'s hatch covers (Figure 4).

However, as they were applied, the chain and webbing lashings were not independent of each other. They were all joined together by virtue of the fact that the athwartships lashings were secured to the fore and aft lengths of chain and these two lengths of chains were joined to each other by spacer chains (Figure 4). Consequently, a breakdown of any part of this system of lashing would compromise the entire system.

To properly secure the cargo, only independent athwartships lashings should have been run over the stows, using the chains provided in Japan, with no fore and aft lengths of chain.

The way the supplied lashing chains were joined together, to make up the fore and aft lengths, also explains why the crew ran out of chains when they were securing the cargo on the hatch covers.

2.2.3 Packaging of the timber veneer

The packs of timber veneer were from Ta Ann Tasmania's rotary peel veneer mill at Smithton, about 85 km by road from the port of Burnie.

They arrived on the wharf and were subsequently loaded on board *Mimasaka* in the same packaging that had been applied at the mill (Figure 2). The packs did not have any strapping or banding around them to ensure that the packing remained as tight as possible during the voyage. As it was, the ‘rigidity’ of the packs relied entirely on the relatively thin plastic wrapping to hold the packs tightly together (Figures 2 and 8).

While this method of packaging might be suitable for in-hold stowage, it is not suitable for deck stowage as exposure to weather and movement is far greater on deck than in the holds.

If the individual packs of veneer had strapping or banding around them, they would have been far more rigid and possibly able to better withstand movement within the cargo stow.

Figure 8: Some of the remaining deck cargo, note the plastic wrapping

2.3 Guidance provided to the crew for stowing and securing the deck cargo

2.3.1 International guidance

The International Maritime Organization’s (IMO) Code of Safe Practice for Ships Carrying Timber Deck Cargo (the timber code) applies ‘to all ships of 24 m or more in length engaged in the carriage of timber deck cargoes’. Under the timber code, timber is defined as meaning ‘sawn wood or lumber, cants, logs, poles, pulpwood and all other type of timber in loose or packaged forms. The term does not include wood pulp or similar cargo’.

The purpose of the timber code is to make recommendations on stowage, securing and operational safety measures designed to ensure the safe transport of mainly timber deck cargoes.

However, while the recommendations contained in the first six chapters of the code are mandated in Australia by Marine Orders Part 42 (Cargo stowage and securing), Appendix A of the code contains advice on general stowage practices and is not mandated by the code. Therefore, the appendix is not mandated in Australian legislation.

Never the less, according to the general introduction to the appendix:

> 1.1 The stowage practices described in this appendix have been found to achieve satisfactory results, provided that account is taken of the recommendations of chapters 1 to 6. Although specific conditions may dictate a departure from these guidelines, the basic principle as detailed in 1.2 should nevertheless be adhered to.
>
> 1.2 The basic principle for the safe carriage of timber deck cargo is, as indicated earlier, to make the stow as solid and compact as practicable. The purpose of this is to:
>
> .1 prevent slack in the stow which could cause the lashings to slacken;
>
> .2 produce a binding effect within the stow; and
>
> .3 reduce to a minimum the permeability of the stow.

At the time of the incident, the timber code applied to *Mimasaka*. The ship was supplied with a copy of the code and the ship's safety management system (SMS) procedure concerning cargo handling made specific reference to the timber code, stating that timber deck cargoes should be secured as per chapter 4 of the code.

Securing

Chapter 4.3 of the timber code gives general advice on securing loose or packaged sawn timber and stated:

> 4.3.1 The timber deck cargo should be secured throughout its length by independent lashings.
>
> 4.3.2 Subject to 4.3.3, the maximum spacing of the lashings referred to above should be determined by the maximum height of the timber deck cargo in the vicinity of the lashings:
>
> .1 for a height of 4 m and below, the spacing should be 3 m;
>
> .2 for heights of above 4 m, the spacing should be 1.5 m.
>
> 4.3.3 The packages stowed at the upper outboard edge of the stow should be secured by at least two lashings each.
>
> 4.3.4·When the outboard stow of the timber deck cargo is in lengths of less than 3.6 m, the spacing of the lashings should be reduced as necessary or other suitable provisions made to suit the length of timber.
>
> 4.3.5 Rounded angle pieces of suitable material and design should be used along the upper outboard edge of the stow to bear the stress and permit free reeving of the lashings.

Chapter 4.3 of the timber code does not specifically mention the use of athwartships lashing for timber deck cargoes. However, in the timber code, the diagrams of different deck cargo stows and their securing arrangements only show athwartships lashings, because of the dangers posed to the cargo by a ship's rolling motion. It is possible that the absence of the word 'athwartships' in the timber

code's text may be taken by some crews as meaning the lashing can be applied fore and aft as well as, or instead of, athwartships.

The requirements of 4.3.1 of the timber code ensure that each athwartships row of cargo is independently lashed. This is so that if one row of lashings 'gives way', only that row of cargo is affected and the remainder of the stow is secure. However, as discussed in section 2.2.2 of this report, *Mimasaka*'s deck stows were not lashed in an independent fashion.

Mimasaka's master and chief mate had no experience securing a timber deck cargo of this sort and thus were probably not aware of the independent lashing requirements of the timber code when they decided to introduce fore and aft lengths of chain into the securing system on the hatch covers. This is a clear indication that they did not consult the timber code, in accordance with the SMS requirement, before deciding on the method of lashing used on the deck stows.

In addition, the instructions sent to the ship by NYK-Hinode Line did not reinforce the timber code's requirement for the independent lashing of the rows of veneer.

As a result, when *Mimasaka* departed from Burnie, the timber veneer on deck was not lashed independently and therefore did not comply with the independent lashing requirements of the timber code.

Packaging

The packaging of the veneer was the responsibility of Ta Ann Tasmania. The company had a legal obligation under SOLAS Chapter VI, as adopted in Australia through Marine Orders Part 42, to ensure that the packaging arrangements complied.

With regard to the packaging of the timber veneer, section 2.3 of Appendix A of the timber code states that:

> Packages for deck stowage should be solidly made up. They should have bands adequate to prevent slackening or disintegration of the packaging during the voyage, which could cause a loosening of the stow as a whole.

While this advice was only a recommendation, it was sound. Although 1.1 of Appendix A makes comment that departures from the guidance provided in the appendix might be necessary, it goes on to state that 'the basic principles as detailed in 1.2 should nevertheless be adhered to'. The principles contained in section 1.2 of Appendix A were to make the deck stow as solid and compact as practicable and the recommendations in section 2.3 made a significant contribution to that end.

Ta Ann Tasmania's packs of timber veneer did not conform to the recommendation in section 2.3. Consequently, the lack of banding on the outside of each pack possibly resulted in the veneer stows on deck not being as secure as they could have been and this, when combined with the lashing arrangement applied in Burnie, possibly contributed to the loss of the deck cargo on 4 October 2010.

Because the recommendations contained in Appendix A of the timber code were not mandated under Marine Orders Part 42, there was no obligation on the Australian Maritime Safety Authority (AMSA) to inspect the packaging of the veneer. As a result, at no time since the shipment of veneer began in 2007 had AMSA undertaken any inspection of the packaging of the veneer to establish

whether Ta Ann Tasmania was packaging the veneer in line with the recommendations contained in section 2.3 of Appendix A of the timber code.

In submission, AMSA stated that:

> AMSA certainly accept that we had not inspected the arrangement... AMSA does acknowledge that our specific cargo securing inspection regime did not capture this ship or these shipments. As you are aware AMSA cannot inspect every arrangement and as a result our inspection regimes are risk based. In regard to cargo securing, our risk approach has been to target dangerous goods at a more elevated level than general deck cargoes. It should also be acknowledged that the history of this cargo did not indicate that issues existed before the *Mimasaka* entering very bad weather with a poor lashing arrangement.
>
> Noting this incident, AMSA has reviewed our port State control guidelines to ensure that, where relevant, checks are made regarding stowing and securing of deck cargoes. AMSA has also provided instructions to its Marine Surveyors to extend the cargo securing inspections to all deck cargoes, where aware of them.

2.3.2 NYK-Hinode Line's guidance

To augment the requirements of chapter 4 of the timber code, NYK-Hinode Line had provided an additional document to the ships carrying timber veneer from Tasmania: an Operation Manual for Loading and Lashing of Tasmanian/Malaysian Dry Veneer (July 2007).

The document had been specifically developed by the charterer for the trade and was used by the crews of all the ships on the trade. The document gave comprehensive directions on how to stow and secure a cargo of timber veneer in a ship's holds and tween deck spaces.

However, although the veneer had been carried on deck since the first shipment in November 2007, this manual gave no information or guidance about the stowage and securing of any veneer cargo carried on the ship's hatch covers.

Consequently, like the crews of the previous ships, *Mimasaka*'s master and chief mate relied on additional instructions, which were emailed by the charterer to the ships' masters before cargo work began, and their own knowledge and experience, to assist them with stowing and securing the deck cargo.

These additional instructions contained no photographs or diagrams of previous cargo stows or securing arrangements and merely stated:

> To secure the cargoes on hatches with being fixed as the base of cargo by angle bars and square timbers and then cover with sheets.

Consequently, when *Mimasaka* berthed in Burnie, neither the ship's operations manual for veneer cargo, nor the emailed instructions, provided the crew with any proper guidance about how the deck cargo should be stowed or secured.

In addition to being less-than-comprehensive, the instructions emailed to the ship were in English, but written by someone in Japan. *Mimasaka*'s crew were Indonesian. It was possible that the crew's understanding of the instructions was hindered by the knowledge of English, by both those on the ship and the person/s responsible for writing them.

Mimasaka's crew misinterpreted the written instructions and the deck cargo was not stowed and secured in accordance with the usual practice for a timber veneer cargo on board the ships on the trade. Had diagrams and photographs been provided, the securing arrangements would most probably have been applied in the correct manner and the cargo not lost.

Despite not having comprehensive stowage and securing instructions (emailed or otherwise) when the cargo was loaded in Burnie, neither the master nor the chief mate sought clarification from NYK-Hinode Line regarding how to properly load and secure the deck cargo. Furthermore, they did not ask for assistance/clarification in determining the proper stowage and securing arrangements from a third party, such as a Recognised Organisation[13].

In submission, NYK-Hinode Line stated that:

> An 'On Hatch Operation' document had been provided to the vessel together with the Operation Manual for Loading and Lashing of Tasmanian/Malaysian Dry Veneer (dated July 2007) referred to in the report. This document is similar to the document later referred to in section 2.3.4 of the report and shows how the angle bar and timber dunnage were to be used and also includes a drawing of the dunnage arrangement and photographs of a stow on deck. NYK-Hinode Line had therefore provided guidance to the crew for the on deck stow.

This 'on hatch operation' document was not provided by the ship's crew to either the ATSB investigators, or the AMSA surveyor, when they attended the ship in Brisbane. The document was not referred to in the operation manual, NYK-Hinode Line's emailed instructions or in the additional instructions provided to the ship in Yamba. Therefore, it is reasonable to conclude that the crew did not know of its existence. However, the document was later provided to the ATSB by NYK-Hinode Line following a request for information in November 2010.

Following the AMSA's surveyor's inspection of *Mimasaka*'s procedures and documentation for cargo securing, the ship was detained for 15 days from 15 October and only released when those procedures and documentation were updated to properly cover the securing of the veneer deck cargo. Therefore, it could be reasonably concluded that because the AMSA surveyor was also not made aware of the 'on hatch operation' document, either on his initial inspection of the ship's procedures or in the first couple of days after the ship was detained, the document came about as a result of the detention.

2.3.3 *Mimasaka*'s cargo securing manual

It is a requirement that a cargo securing manual (CSM) is carried on all types of ships engaged in the carriage of all cargoes, other than solid and bulk liquids. In accordance with Chapters VI and VII of SOLAS, and the IMOs *Code of Safe Practice for Cargo Stowage and Securing,* cargo units are to be stowed and secured throughout a voyage in accordance with a ship's CSM.

[13] A private body, most commonly a classification society, which carries out surveys and issues or endorses Statutory Certificates of ships on behalf of a flag State.

Mimasaka's CSM was approved in October 2009 by Nippon Kaiji Kyokai (ClassNK), before the ship entered service. The CSM was again approved by BV in January 2010, when the ship's classification society was changed.

Appendix 3 of *Mimasaka*'s CSM contained 'guidance as to the recommended location and method of stowing and securing of cargoes'. While this Appendix contained a section on the 'general guidelines for under-deck stowage of logs' (Annex 11), it did not contain any information about the stowage and securing of timber veneer cargos, either in the ship's holds or on its hatch covers.

The export of timber veneer from the Tasmanian ports of Hobart and Burnie to South East Asia began in November 2007. The carriage of the veneer had always been on NYK-Hinode Line chartered ships, all of which were of a similar design and size as *Mimasaka.*

However, despite this, a section specifically for the stowage and securing of timber veneer cargo was not included in *Mimasaka*'s CSM. Had such a section been in the manual, NYK-Hinode Line would not have had to provide additional instructions to the ship carrying the cargo each voyage.

2.3.4 Instructions provided after the loss of the cargo

Following the loss of the veneer, the ship's charterer sent a comprehensive set of securing instructions to the ship while it was in Yamba. The instructions set out how the dunnage and angle iron were as to be used and included a photograph and a drawing of a properly secured stow of veneer.

The photograph clearly showed the dunnage and angle iron arrangement and the veneer pack sitting directly on the hatch cover and not on the dunnage (Figure 9).

Figure 9: Photograph in the lashing instructions provided to the ship in Yamba

Had the initial instructions for stowing and securing the veneer deck cargo been the same as those provided to the ship at Yamba, the deck cargo would probably have been appropriately stowed and secured.

2.4 Actions of the crew

2.4.1 Ship handling after the cargo loss

Mimasaka's master did not make any attempt to reduce speed or alter the ship's course when he was told by the chief mate at 0850 that he had seen the deck cargo on the after hatch cover move to port. It was not until 0855, when the majority of the deck cargo had been lost overboard that the master reduced the ship's speed to slow ahead and looked for a possible place of refuge to seek shelter.

There was no such place in close proximity so he decided to maintain the same 015° (T) course despite there being no change in the sea conditions. It was not until 1330, some 4½ hours after the initial loss of cargo, when more cargo was lost overboard and the ship took a list to port, that the master decided to divert to Yamba.

The weather experienced on the morning of 4 October was from the east, almost beam onto the ship. Following the initial loss of cargo at 0855, the master could have reduced the ship's speed and altered course to starboard and put the ship's head into the seas and effectively hove the ship to. The resultant reduction in the ship's movement may have provided the crew with a safe opportunity to go on deck and resecure the remaining cargo to prevent it moving back to port. It would also have allowed time for a more thorough assessment of the situation.

Between 0850 and 1330, the master did not take the opportunity to stop or heave the ship to and resecure the remaining deck cargo. His decision to continue the voyage in the prevailing sea conditions was contrary to the practice of good seamanship.

2.4.2 The master's distress VHF radio call

When the cargo was lost, the ship developed a 20° list to starboard. Shortly afterwards, at about 0900, the master made a distress call on very high frequency (VHF) radio channel 16, alerting anyone listening to the fact that the ship was in heavy weather and requesting assistance because of the loss of cargo and subsequent list. The call was acknowledged by the volunteer marine rescue unit at Coffs Harbour[14], who passed the information to the Rescue Coordination Centre (RCC) in Canberra. The RCC then began rescue action which included tasking a helicopter and diverting a nearby merchant ship. In addition, the water police also tasked one of their vessels from Coffs Harbour to assist.

At 1055, when the ship was upright, the master cancelled the distress call, deciding that the ship would be able to resume its voyage unassisted.

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[14] About 43½ miles to the southwest of the ship's position at 0855.

There are three types of calls which seafarers can use in times of emergencies. The highest in priority is the distress (Mayday) call: used when a vessel or person is 'in grave and imminent danger and in need of immediate help'. The second is the urgency (Pan Pan) call; used to signify that there is an urgency on board a vessel but that at the time the call is made, there is no immediate danger to anyone's life or to the vessel itself[15]. The final call is a safety (Securité[16]) call and is used for navigational or weather warnings.

While it is difficult to say whether *Mimasaka*'s master's use of the distress call was not correct at the time, when a distress call is used, there is an expectation by shore search and rescue (SAR) authorities that the vessel concerned is in such a situation that abandonment is imminent or likely to be required. In this case, the situation regarding the list was rectified within 2 hours by the use of water ballast on board and the distress call was cancelled. It could therefore be argued that a distress situation did not actually exist at the time the initial distress call was made.

Had the master taken more appropriate action with regard to the ship's heading immediately after the list developing, he would had more time to assess what assistance, if any, was required.

An urgency call would have informed the appropriate SAR authorities that a safety problem existed on board *Mimasaka*, but that, for the time being at least, there was no immediate danger to anyone's life or to the ship itself. As it was, using a distress call resulted in the SAR authorities 'dropping all other activities' and immediately initiating a rescue attempt.

2.4.3 Use of water ballast to bring the ship upright

Chapter 6 of the timber code deals with action to be taken during a voyage and 6.3 deals with listing during a voyage:

> 6.3.1 A major shift of deck cargo will obviously be immediately apparent. Deck cargo may however have shifted imperceptibly or there may have been a shift of cargo below decks. An immediate examination should determine whether or not cargo has shifted and if this is the case the master will have several remedies available to him depending upon the exact circumstances.
>
> 6.3.2 The ballasting and transferring of ballast or fuel to reduce or correct a list caused by a shifted cargo should, however, be carefully considered since this action would, in all probability, result in a far greater list if the cargo should subsequently shift to the other side.

These words are repeated in *Mimasaka*'s SMS procedure on cargo handling.

When the cargo was lost, the ship developed a 20° list to starboard. To correct this list, the chief mate ballasted two port side ballast tanks. While this had the desired effect of bringing the ship upright, when the ship rolled to port, the unsecured deck cargo slid to port, and the ship then developed a 15° list to port in the weather conditions at the time.

Under the circumstances, considering the weather being encountered and the movement of the ship, it was considered unsafe for the crew to go on deck either to

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15 General Radiotelephone Operations Procedures (Urgency Communications).

16 Pronounced SAY CURE IT TAY.

secure the cargo where it had moved to, or to move it back to port and reduce the list. Consequently, the chief mate did not have any other option available to him to bring the ship back upright.

However, the subsequent movement of the cargo to port, and the resultant list, illustrates the potential danger highlighted in 6.3.2 of the IMO timber code.

3 FINDINGS

3.1 Context

On 4 October 2010, 604 packs of timber veneer were lost overboard from the deck of the Panama registered multipurpose cargo ship *Mimasaka*. At the time, the ship was in rough seas, about 27 miles southeast of the NSW town of Yamba.

From the evidence available, the following findings are made with respect to the cargo loss. They should not be read as apportioning blame or liability to any particular organisation or individual.

3.2 Contributing safety factors

- The packs of timber veneer were lost overboard when the deck stows of cargo moved and the lashing system used to secure it to the ship's hatch covers failed.
- The packs of timber veneer that were loaded onto *Mimasaka*'s hatch covers were not appropriately stowed or secured before the ship departed from Burnie. The dunnage supplied to the ship was not used to restrain the packs and the lashings were not independent of each other.
- *Mimasaka*'s master and chief mate were not aware of the cargo securing requirements contained in the International Maritime Organization's Code of Safe Practice for Ships Carrying Timber Deck Cargo.
- The instructions that were emailed to *Mimasaka*'s master by NYK-Hinode Line did not provide the crew with proper guidance about how to stow and secure the packs of timber veneer on deck. *[Significant safety issue]*
- Despite the inadequate guidance for the stowage and securing of timber veneer packs on deck, neither the master nor chief mate sought clarification from NYK-Hinode Line or a Recognised Organisation to resolve their misunderstanding of that guidance.
- *Mimasaka*'s cargo securing manual did not contain any information relating to the stowage and securing of timber veneer. *[Significant safety issue]*
- The Operation Manual for Loading and Lashing of Tasmanian/Malaysian Dry Veneer, developed by NYK-Hinode Line for use by their ships carrying timber veneer, did not contain any information relating to the stowage and securing of the timber veneer cargo on deck. *[Significant safety issue]*
- Between 0850 and 1330, the master did not take the opportunity to stop or heave the ship to and resecure the remaining deck cargo. His decision to continue the voyage in the prevailing sea conditions was contrary to the practice of good seamanship.

3.3 Other safety factors

- Ta Ann Tasmania did not follow the recommendations contained in section 2.3 of Appendix A of the International Maritime Organization's Code of Safe

Practice for Ships Carrying Timber Deck Cargo when they packaged the timber veneer for shipment by sea. *[Minor safety issue]*

- The Australian Maritime Safety Authority had not inspected the packs of veneer at any time since the shipments of veneer from Tasmania began to establish whether Ta Ann Tasmania was packaging the veneer in line with the recommendations contained in section 2.3 of Appendix A of the International Maritime Organization's Code of Safe Practice for Ships Carrying Timber Deck Cargo. *[Minor safety issue]*

3.4 Other key finding

- Had the master taken more appropriate action with regard to the ship's heading immediately after the list developing, he would had more time to assess what assistance, if any, was required. Consequently, he could have made an urgency VHF call rather than a distress call.
- While the use of water ballast to bring *Mimasaka* upright following the initial loss of cargo was appropriate, this incident illustrates the potential danger highlighted in 6.3.2 of the International Maritime Organization's Code of S*afe Practice for Ships C*arrying Timber Deck Cargo.

4 SAFETY ACTION

The safety issues identified during this investigation are listed in the Findings and Safety Actions sections of this report. The Australian Transport Safety Bureau (ATSB) expects that all safety issues identified by the investigation should be addressed by the relevant organisation(s). In addressing those issues, the ATSB prefers to encourage relevant organisation(s) to proactively initiate safety action, rather than to issue formal safety recommendations or safety advisory notices.

All of the responsible organisations for the safety issues identified during this investigation were given a draft report and invited to provide submissions. As part of that process, each organisation was asked to communicate what safety actions, if any, they had carried out or were planning to carry out in relation to each safety issue relevant to their organisation.

4.1 NYK-Hinode Line

4.1.1 Emailed stowage and securing instructions

Significant safety issue

The instructions that were emailed to *Mimasaka*'s master by NYK-Hinode Line did not provide the crew with proper guidance about how to stow and secure the packs of timber veneer on deck.

Action taken by NYK-Hinode Line

The ATSB has been advised by NYK-Hinode Line that, following the incident, NYK-Hinode updated its Operation Manual for Loading and Lashing of Tasmanian/Malaysian Dry Veneer to include reference to on deck stowage and securing and therefore the need for additional emailed instructions is no longer necessary.

ATSB assessment of action

The ATSB is satisfied that the action taken by NYK-Hinode Line adequately addresses this safety issue.

4.1.2 Cargo securing manual

Significant safety issue

Mimasaka's cargo securing manual did not contain any information relating to the stowage and securing of timber veneer.

Response from NYK-Hinode Line

The ATSB has been advised that this item is the responsibility of the ship's owner and, as such, this safety action should be directed to the owners of the vessel and not NYK-Hinode Line. However, the Australian Maritime Safety Authority (AMSA) has advised the ATSB that the ship was detained in Brisbane and subsequently released from detention when its procedures for cargo securing and its cargo securing manual were updated to provide guidance for the stowage and securing of timber veneer deck cargo.

ATSB assessment of response

Given the information provided by AMSA, the ATSB is satisfied that the action taken in regard to updating the cargo securing manual adequately addresses this safety issue.

4.1.3 Instructions contained in the Operation Manual

Significant safety issue

The Operation Manual for Loading and Lashing of Tasmanian/Malaysian Dry Veneer, developed by NYK-Hinode Line for use by ships carrying timber veneer, did not contain any information relating to the stowage and securing of the timber veneer cargo on deck.

Action taken by NYK-Hinode Line

The ATSB has been advised by NYK-Hinode Line that the operation manual was revised after the incident and a new manual, titled Manual for Loading, Stowage and Securing of Dry and Wet (Green) Veneer and Plywood, was published in March 2011 and has been given to all ships carrying veneer cargo. The revised manual now includes guidance for stowage of veneer packs on deck and its contents and instructions have been noted by Nippon Kaiji Kyokai (ClassNK).

ATSB assessment of action

The ATSB is satisfied that the action taken by NYK-Hinode Line adequately addresses this safety issue.

4.2 Ta Ann Tasmania

4.2.1 Packaging of the timber veneer

Minor safety issue

Ta Ann Tasmania did not follow the recommendations contained in section 2.3 of Appendix A of the International Maritime Organization's Code of Safe Practice for Ships Carrying Timber Deck Cargo when they packaged the timber veneer for shipment by sea.

Action taken by Ta Ann Tasmania

The ATSB has been advised by Ta Ann Tasmania that following the loss of the timber veneer, the company began banding all packaged timber veneer deck cargo to prevent the deck stows from becoming slack during a voyage.

ATSB assessment of action

The ATSB is satisfied that the action taken by Ta Ann Tasmania adequately addresses this safety issue.

4.3 Australian Maritime Safety Authority

4.3.1 Veneer packaging inspection

Minor safety issue

The Australian Maritime Safety Authority had not inspected the packs of veneer at any time since the shipments of veneer from Tasmania began to establish whether Ta Ann Tasmania was packaging the veneer in line with the recommendations contained in section 2.3 of Appendix A of the International Maritime Organization's Code of Safe Practice for Ships Carrying Timber Deck Cargo.

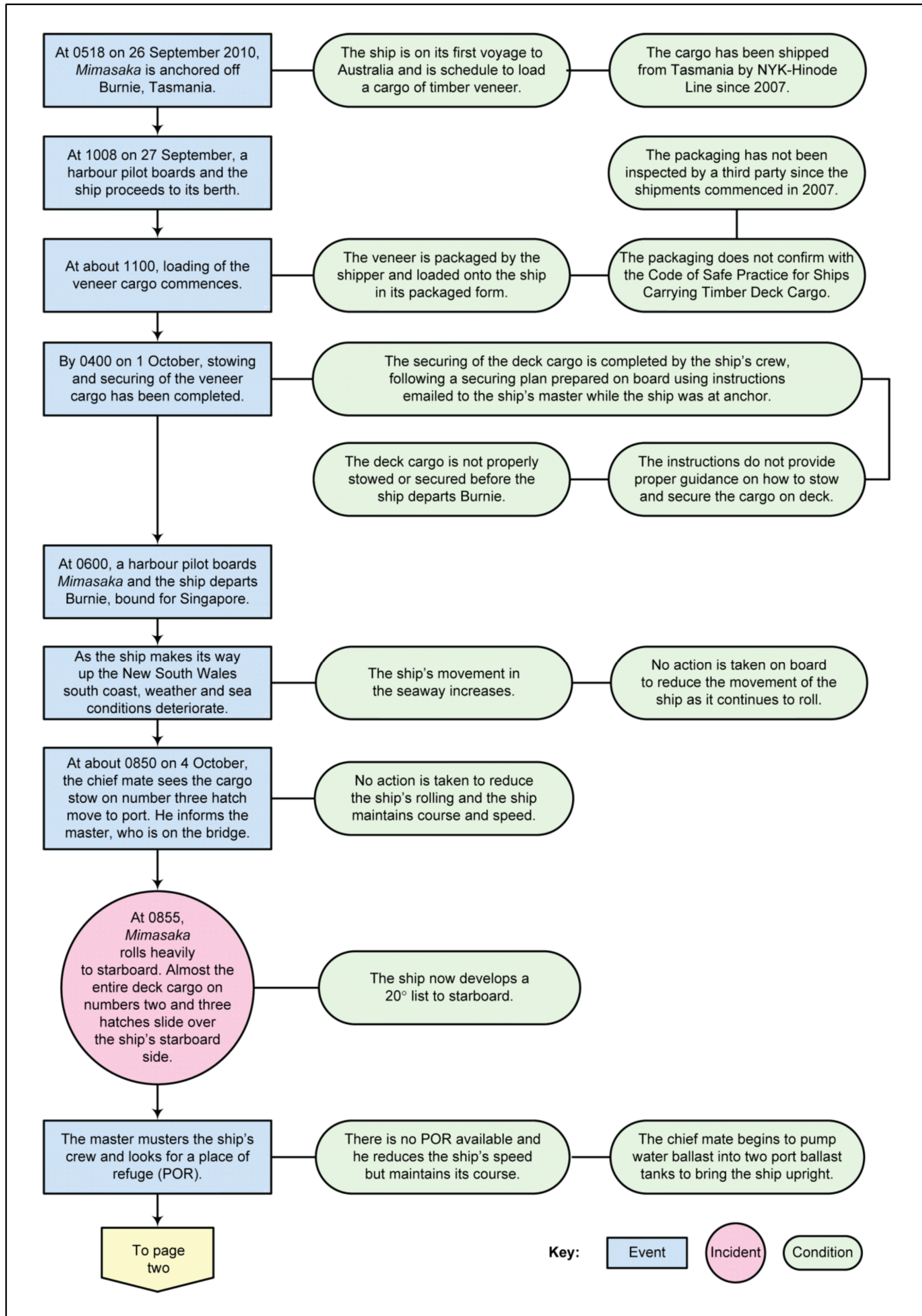
Action taken by the Australian Maritime Safety Authority

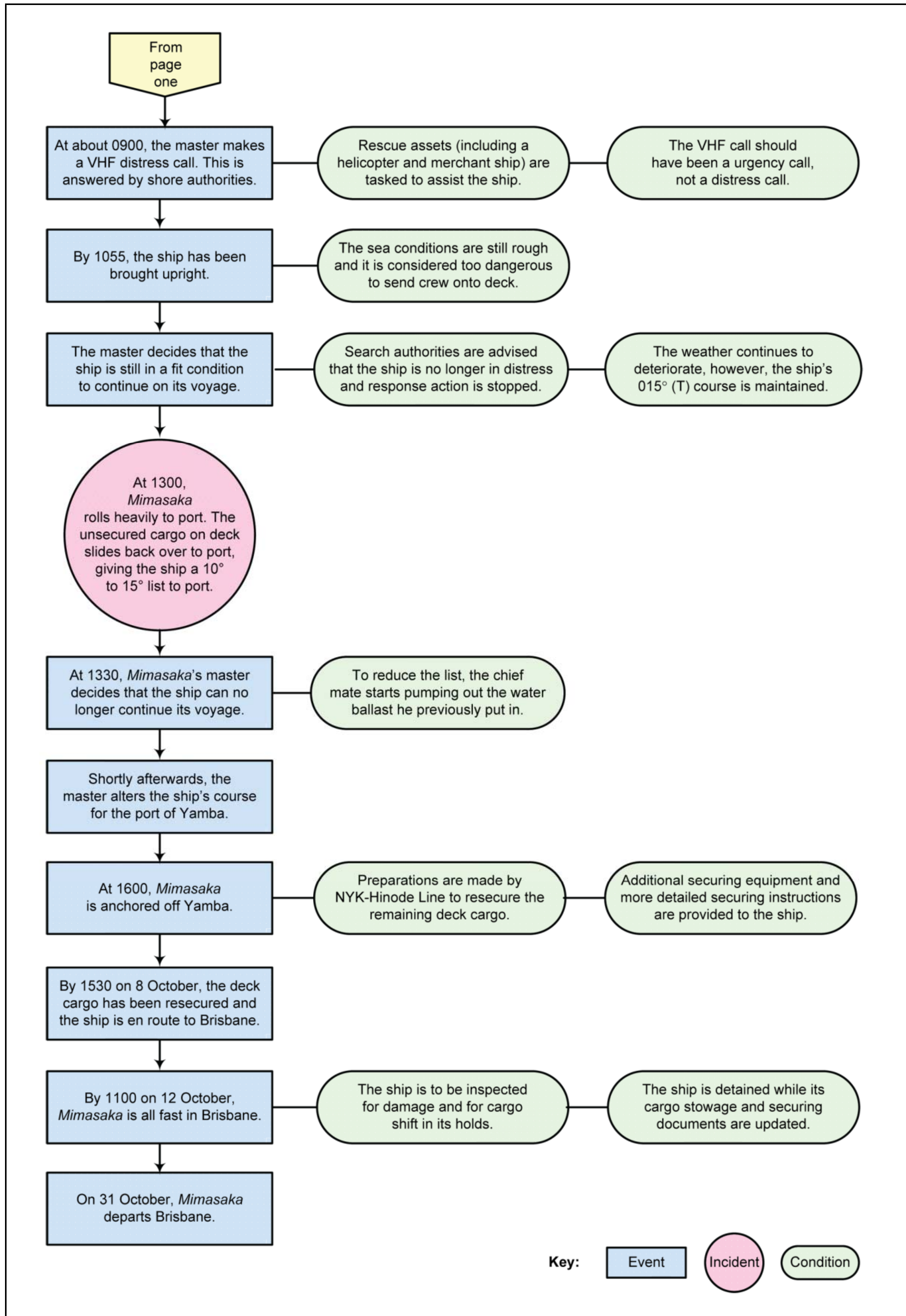
The ATSB has been advised by the Australian Maritime Safety Authority (AMSA) that Appendix A of the Code of Safe Practice for Ships Carrying Timber Deck Cargo is not mandated by the Code and as such, is not mandated in Australian legislation. Therefore, this Appendix cannot be applied by AMSA to inspect the packaging arrangement of the veneer. However, noting this incident, AMSA has reviewed its port State control guidelines to ensure that, where relevant, checks are made regarding stowing and securing of deck cargoes. AMSA has also provided instructions to its marine surveyors to extend the cargo securing inspections to all deck cargoes, where aware of them.

ATSB assessment of action

The ATSB is satisfied that the action taken by the Australian Maritime Safety Authority adequately addresses this safety issue.

APPENDIX A: EVENTS AND CONDITIONS




From page one
At about 0900, the master makes a VHF distress call. This is answered by shore authorities.
Rescue assets (including a helicopter and merchant ship) are tasked to assist the ship.
The VHF call should have been a urgency call, not a distress call.
By 1055, the ship has been brought upright.
The sea conditions are still rough and it is considered too dangerous to send crew onto deck.
The master decides that the ship is still in a fit condition to continue on its voyage.
Search authorities are advised that the ship is no longer in distress and response action is stopped.
The weather continues to deteriorate, however, the ship's 015° (T) course is maintained.
At 1300, *Mimasaka* rolls heavily to port. The unsecured cargo on deck slides back over to port, giving the ship a 10° to 15° list to port.
At 1330, *Mimasaka*'s master decides that the ship can no longer continue its voyage.
To reduce the list, the chief mate starts pumping out the water ballast he previously put in.
Shortly afterwards, the master alters the ship's course for the port of Yamba.
At 1600, *Mimasaka* is anchored off Yamba.
Preparations are made by NYK-Hinode Line to resecure the remaining deck cargo.
Additional securing equipment and more detailed securing instructions are provided to the ship.
By 1530 on 8 October, the deck cargo has been resecured and the ship is en route to Brisbane.
By 1100 on 12 October, *Mimasaka* is all fast in Brisbane.
The ship is to be inspected for damage and for cargo shift in its holds.
The ship is detained while its cargo stowage and securing documents are updated.
On 31 October, *Mimasaka* departs Brisbane.
Key:
Event
Incident
Condition

APPENDIX B: SHIP INFORMATION

Mimasaka

IMO Number	9562831
Call sign	3EZJ6
Flag	Panama
Port of Registry	Panama
Classification society	Bureau Veritas (BV)
Ship Type	Multipurpose ship
Builder	Higaki Shipbuilding, Japan
Year built	2010
Owners	Mimasaka Investments, Panama
Ship managers	Well Shipmanagement and Maritime, Taiwan
Gross tonnage	9,807
Net tonnage	4,823
Deadweight (summer)	14,061 tonnes
Summer draught	9.45 m
Length overall	127.70 m
Length between perpendiculars	119.50 m
Moulded breadth	19.60 m
Moulded depth	14.00 m
Engine	1 x MAN-B&W 6S35MC
Total power	4,440 kW
Speed	13.0 knots
Crew	18

APPENDIX C: SOURCES AND SUBMISSIONS

Sources of Information

The sources of information during the investigation included:

The master and crew of *Mimasaka*

The New South Wales Office of Environment and Heritage

The New South Wales Public Work's Manly Hydraulics Laboratory

NYK-Hinode Line

Ta Ann Tasmania

The Australian Maritime Safety Authority

References

International Maritime Organization. *Code of Safe Practice for Ships Carrying Timber Deck Cargo (Resolution A.715(17)).* International Maritime Organization, London, 1991

International Maritime Organization. *Safety of Life at Sea Convention (SOLAS).* Consolidated edition, London, 2009

Industry Canada. RIC-22 – General Radiotelephone Operations Procedures (Urgency Communications). Accessed online at: http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf00033.html

The Australian Maritime Safety Authority. *Marine Orders Part 42 (Cargo stowage and securing).* Issue 2, December 2003

Submissions

Under Part 4, Division 2 (Investigation Reports), Section 26 of the *Transport Safety Investigation Act 2003*, the ATSB may provide a draft report, on a confidential basis, to any person whom the ATSB considers appropriate. Section 26 (1) (a) of the Act allows a person receiving a draft report to make submissions to the ATSB about the draft report.

A draft of this report was provided to *Mimasaka*'s master and chief mate, NYK-Hinode Line, Well Shipmanagement and Maritime, Ta Ann Tasmania, the Australian Maritime Safety Authority (AMSA), the Panama Maritime Authority and Bureau Veritas (BV).

Submissions were received from NYK-Hinode Line, Well Shipmanagement and Maritime, Ta Ann Tasmania and AMSA. The submissions were reviewed and where considered appropriate, the text of the report was amended accordingly.

Independent investigation into the loss of deck cargo from the Panama registered multipurpose cargo ship *Mimasaka* at sea off New South Wales on 4 October 2010.