

### Collision in the Kanmon Passage between a cargo ship proceeding northward from Tobata Passage to Kanmon Passage and another cargo ship proceeding eastward in the Kanmon Passage

Outline: Manned with a master and 19 crew members and guided by two pilots, Cargo Ship A, which left Seitetsu Tobata Hakuchi, Wakamatsu No. 5 Section, Kanmon Port, was proceeding in the Kanmon Passage, toward the east of Mutsure Shima Island. On the other hand, manned by a master and nine crewmembers, Cargo Ship B, which left an anchorage east of Mutsure Shima Island, was sailing in the Kanmon Passage toward Sakaigawa Hakuchi, Wakamatsu No. 5 Section, Kanmon Port. They collided with each other inside the Kanmon Passage about 30 seconds past 0742 hours on July 22, 2008. Vessel A sustained dent damage in the bow section, and Vessel B suffered flooding in the hold, causing her to list to the starboard side, as a result of cracks, in addition to dent damage, in the starboard shell plating. No personal injuries or deaths were incurred on board either vessel.

#### Events leading to the accident

#### Principal factors

#### Events leading to the accident

#### Vessel A (cargo ship)

Gross tonnage : 88,594 tons  
 L × B × D : 289.00 m × 45.00 m × 24.10 m  
 Flag state : The Republic of Panama  
 Crew members, etc : Master A (of the Republic of Korea) and 19 crew members ; Pilots A1 and A2  
 Load condition : No cargo

#### Vessel B (cargo ship)

Gross tonnage : 1,312 tons  
 L × B × D : 73.00 m × 11.50 m × 7.00 m  
 Flag state : The Kingdom of Cambodia  
 Crew members, etc : Master B (of the People's Republic of China) and 9 crew members  
 Load condition : Graphite

- Under the guidance of Pilot A1, Master A left Tobata Hakuchi, posting a deck officer to the engine control panel and a sailor to the steering wheel for manual steering.
- Pilot A1 posted four tugboats for shiphandling assistance, with Pilot A2 as his assistant.

#### [ Weather and sea conditions ]

The weather was fine. The tidal stream near the scene of the accident was a weak one flowing east north-eastward.

After weighing anchor from an anchorage east of Mutsure Shima Island, Master B proceeded, with a sailor posted as a helmsman for manual steering, toward Sakaigawa Hakuchi, Kanmon Port.

#### About 0730 hrs

Pilot A2 sighted Vessel B on his port bow for the first time and reported it to Pilot A1.

Pilot A2 obtained, from Kanmon MARTIS, information on westbound Vessel C in the vicinity of Kanmon Passage No. 19 lightbuoy.

Pilot A2 contacted Vessel C, which accepted the proposal that Vessel A would proceed ahead of Vessel C.

#### About 0732 hrs

The pilotage duty was transferred from Pilot A1 to Pilot A2.

#### About 0734 hrs

Pilot A2 put the engine harbour full ahead in preparation for entering the Tobata Passage.

#### About 0735 hrs

When Vessel B had closed to about 2,540 m on his port bow, Pilot A2 received a report, from one of the tugboats used for his assistance, that Vessel B was proceeding at a very slow speed to Sakaigawa.

Pilot A2 instructed the tugboat to request Vessel B to increase speed so as to cross ahead of Vessel A.

#### Special sailing rule on the basis of the Regulations for the Enforcement of the Act on Port Regulations

Right of way between a vessel sailing the Kanmon Passage and another one sailing the Tobata Passage

▶ When a vessel sailing the Kanmon Passage is expected to encounter another one sailing the Tobata Passage, the vessel sailing the Tobata Passage shall keep out of the way of the other sailing the Kanmon Passage.

She was sailing along the Kanmon Passage and Master B believed that Vessel A would avoid his even when they encountered each other in the same passage.

Vessel A was proceeding at a low speed toward the Kanmon Passage.

Pilots would request cooperative action even from vessels sailing in the Kanmon Passage, as necessary, because it is difficult for large vessels, like Vessel A, to take avoiding action inside a passage.

Pilot A2 believed that, in response to his request, Vessel B would increase her sailing speed to pass ahead of vessel A.

Until then, vessels used to comply with such requests made via tugboats.

#### About 0722 hrs

She sailed southbound using Kanmon Passage No. 10 lightbuoy as a steering guide.

#### Vessel A



#### Vessel B (after collision)



#### About 0732 hrs

While sailing southbound in the Kanmon Passage at a speed of 4.8 knots over the ground, he sighted Vessel A and the four assisting tugboats, for the first time, at a distance of about 3,140 m on his starboard bow.

#### About 0735 hrs

While sailing southward at a speed of 5.1 knots, when Vessel A closed to a distance of 2,540 m on his starboard bow, he turned the helm to port in order to put his vessel on the course of the leading lights.

Kanmon MARTIS announced to each vessel in English to the effect that Vessel A would leave the Tobata Passage and proceed toward the east of Mutsure Shima Island.

It is considered possible that Vessel B did not hear the announcement from Kanmon MARTIS.

To next page

From previous page

About 0736 hrs

Vessel A entered the Tobata Passage.

Pilot A2 took notice of a risk of collision with Vessel B and gave a warning signal on the whistle.

About 0739 hrs

Although he received a report from one of his tugboats that Vessel B was not increasing her speed, Pilot A2 still increased his own vessel speed.

Pilot A1 instructed one of the tugboats to request Vessel B to take all her way off by working the engine full astern and putting the rudder hard over to starboard.

About 0740 hrs - 0740.30hrs

After putting the rudder hard over to port, Pilot A2 gave instructions to stop the engine.

About 0741 hrs

She entered the Kanmon Passage.

Master A gave instructions to work the engine full astern, almost at the same time as Pilot A2 did so.

About 0742.30 hrs

On a heading of 019° and at an approximate speed of 7.2 knots, the bow of Vessel A collided with the starboard amidships section of Vessel B.

Pilots A1 and A2 were not aware, at a stage before entering the Tobata Passage, of Vessel B approaching them while involving risk of encounter.

They did not attempt to get such information as Vessel B's course, speed and name, by using the automatic radar plotting aid (ARPA) and the automatic identification system (AIS), nor communicate directly with her by VHF.

Vessel B, which was in sight under good visibility, accepted the request to increase her speed.

With the presence of tidal streams from his port side, Pilot A2 made allowance for her drift to starboard.

Pilot A2 took into account the fact that it was arranged for Vessel A to proceed ahead of westbound Vessel C.

She was almost fully laden.

Master B did not slacken his speed or take all way off since he was increasing it in response to a request from one of the tugboats assisting Vessel A.

Bearing in mind the presence of a lightbuoy on his starboard side and shallow waters outside the passage, Master B did not turn to starboard.

Upon receiving a request — conveyed in English with a loudspeaker by an approaching tugboat for Vessel A — to immediately put the engine full ahead, he agreed to it.

About 0736 hrs

While sailing at an approximate speed of 5.2 knots, he increased the pitch from 16° to 20° for acceleration.

About 0740 hrs

Despite the increase of the pitch, she continued sailing at almost the same speed of 5.4 knots.

About 0741 hrs

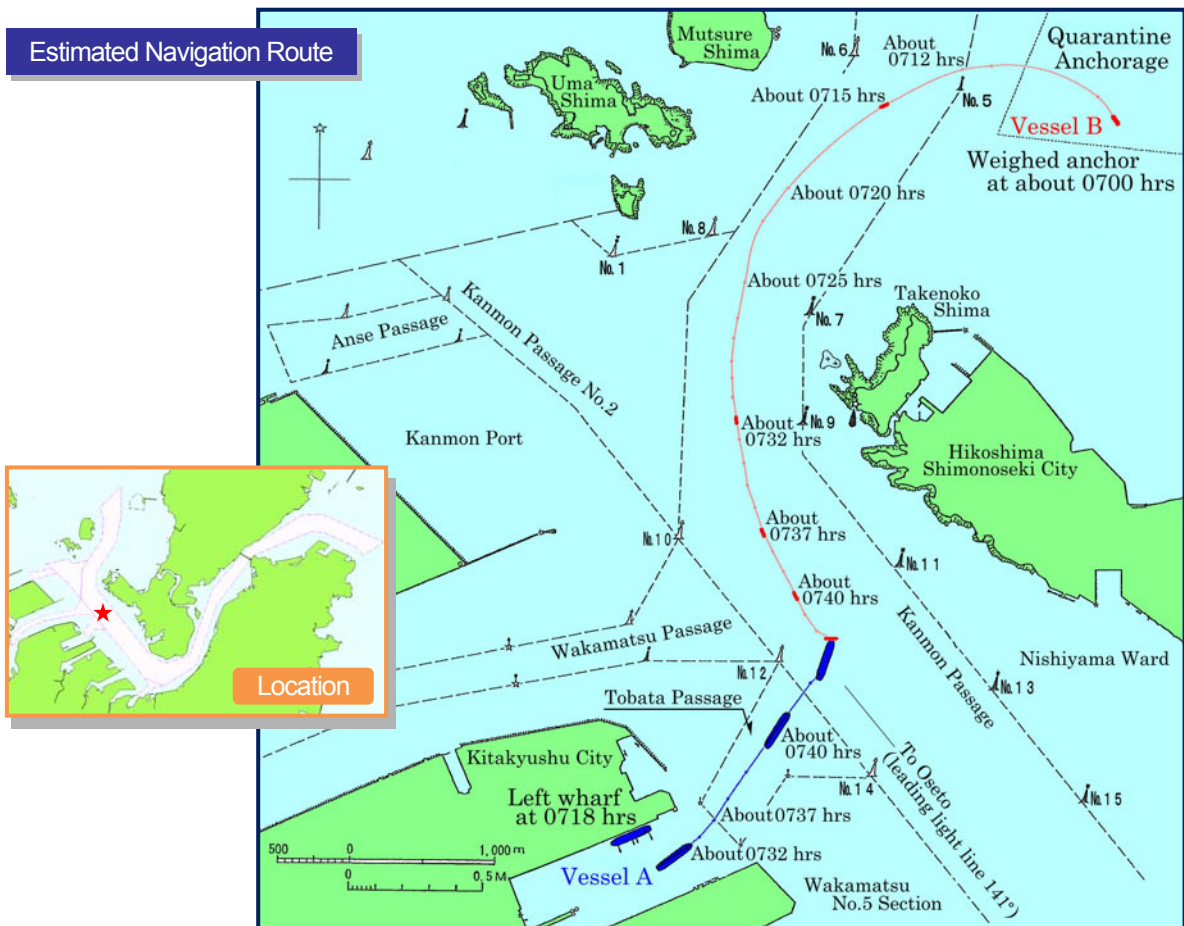
Although he received a request, from one of the tugboats, to work the engine full astern and put the rudder hard over to starboard, he put the rudder 30° to port when Vessel A had closed to a distance of about 670 m on his starboard bow.

About 0742.30 hrs

On a heading of 084° and at an approximate speed of 4.2 knots, she collided with Vessel A.

As a result of collision, she sustained a flooding in the cargo hold, forcing her to list to starboard.

Estimated Navigation Route



## Analysis on the accident occurrence

In this accident, which occurred in Kanmon Port, it is considered probable that Vessel A—which was sailing northeastward from Tobata Passage to Kanmon Passage—did not keep out of the way of Vessel B—which was proceeding southeastward through the Kanmon Passage—when there was a risk of their encounter inside the Kanmon Passage, and continued increasing her speed while maintaining her course; and that Vessel B continued sailing almost at the same speed on a course almost along the general direction of the passage because she was not aware of the situation which required that she take action to avert collision since it could not be avoided by the action of Vessel A alone, which had already developed a close-quarters situation.

The report analyzes as follows about factors which contributed to the occurrence of the accident.

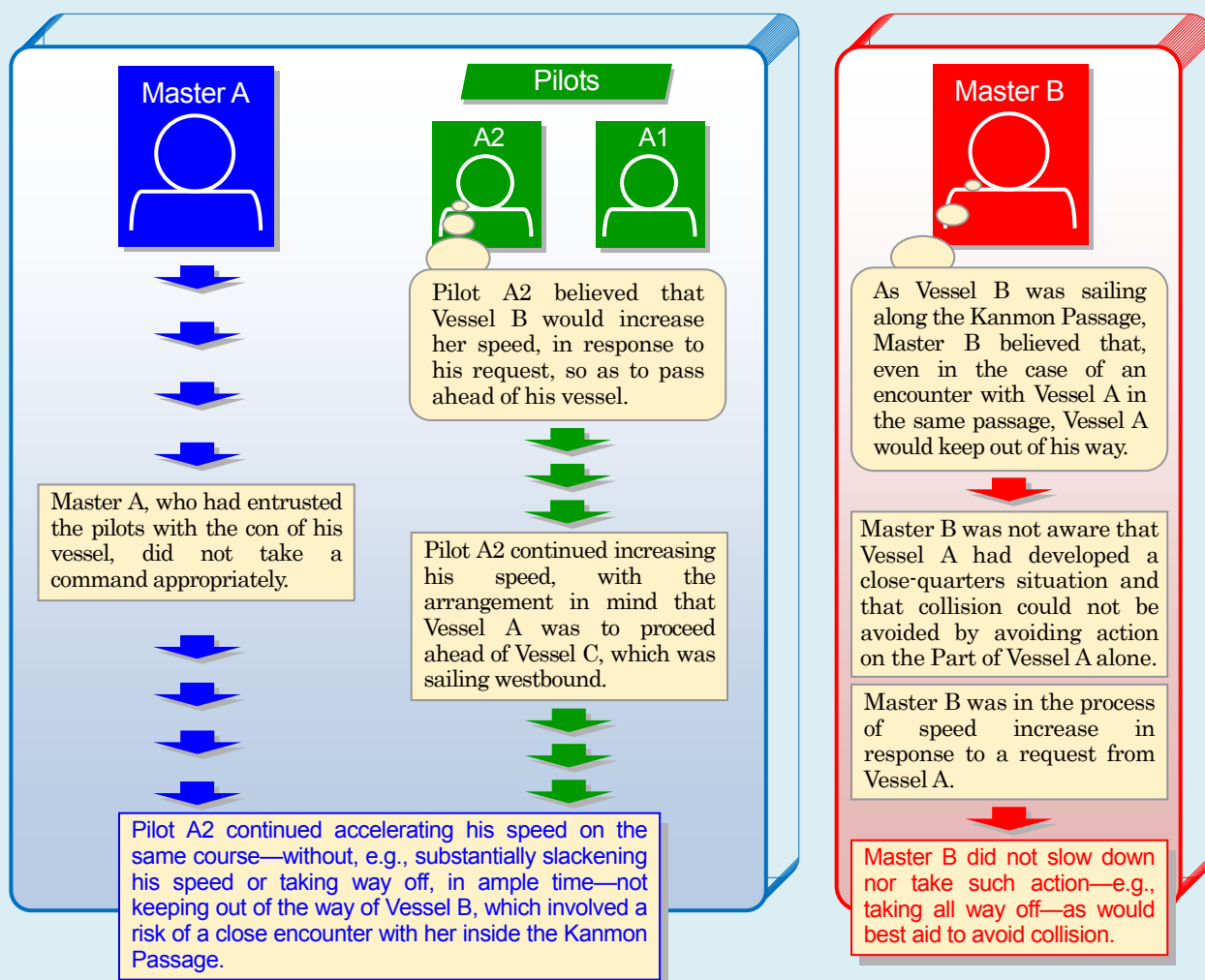
- ◆ Vessel A, which was sailing the Tobata Passage, was proceeding almost on a constant course while increasing her speed. Vessel B, which was following the Kanmon Passage, received a request to increase her speed, but could not comply with the request and sailed, in fact, maintaining the same speed and course, thus, resulting in both vessels approaching each other in such a manner as to involve risk of encounter inside the Kanmon Passage.

→ Vessel A, which was sailing the Tobata Passage, was required, in accordance with the provisions of the Regulations for the Enforcement of the Act on Port Regulations, to keep out of the way of Vessel B, which was sailing the Kanmon Passage. In addition, as the 'give-way vessel', as specified in the Act on Preventing Collision at Sea, she was obliged to take, so far as possible, early and substantial action.

→ Vessel B, as the 'stand-on vessel', as specified in the Act on Preventing Collision at Sea, was obliged to keep her course and speed, and, in addition, she should have taken such action as would best aid to avoid collision if she had found herself so close that collision could not be avoided by the action of Vessel A alone.

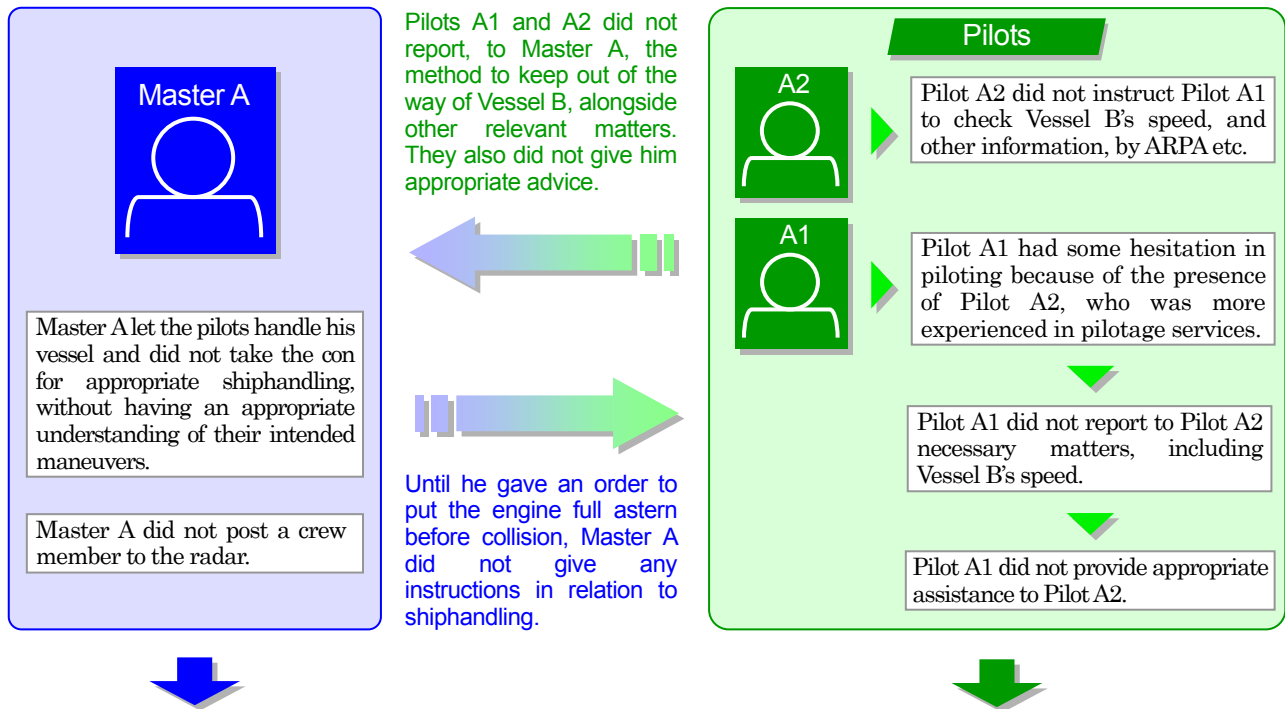
### 《Pilotage and master's authority to take command of the vessel in navigation》

- ◆ In the Pilotage Act, if a pilot has reported to a vessel, the master of the vessel is required to have the pilot guide her unless he has a justifiable reason to reject him. While his vessel is under the guidance of a pilot, the master is not supposed to construe that such act releases him, the master, from his responsibility to pursue safe navigation nor such act infringes upon his authority.
- ◆ In the Kanmon Straits & Harbour Pilot Association's service provision contract, the pilot is defined as a person who is supposed to provide pilotage services in good faith in the capacity of an advisor to the master, and, his presence on board does not change the master's authority or responsibility for safe navigation.



## Analysis of coordination on the bridge of Vessel A

As indicated in the analysis of the accident, it is considered probable that Master A did not take the con of his vessel for appropriate shiphandling in this accident. The investigation report says that Master A's not taking the con for appropriate maneuvering is considered attributable to a lack of appropriate advice from the pilots, and the inappropriate use of information on the bridge, together with poor coordination among personnel on the bridge.



## With a view to preventing recurrence

The JTSB has conducted the following analysis with a view to preventing a recurrence of a similar accident.

### Analysis for the prevention of a recurrence of a similar accident

- ◆ The operation of a vessel is under the master's authority and he is required to monitor, as the commander of his vessel, whether the pilot is maneuvering his vessel appropriately without jeopardizing the safety of navigation.
- ◆ In order for Master A to take the con for appropriate maneuvers, he was required to understand information provided by Kanmon MARTIS, communications with tugboats and Vessel C, and mutual conversation between the pilots. For that purpose, the pilots should have given such information to Master A, as necessary.
- ◆ It is effective for pilots to communicate with other vessels via assisting tugboats. However, it is sometimes desirable for both vessels to communicate directly via VHF, as necessary so that pilots fully understand a foreign vessel's intention and avoid any misunderstanding, which can be caused by transferring messages.

◆ Important points for safe navigation in the western section of Kanmon Kaikyo are shown on Page 14.

The investigation report of this accident is publicized on the website of the JTSB(issued on May.28, 2010)

[http://www.mlit.go.jp/jtsb/ship/report/MA2010-5-1\\_2008tk0003.pdf](http://www.mlit.go.jp/jtsb/ship/report/MA2010-5-1_2008tk0003.pdf) (Japanese version only)