



**NATIONAL TRANSPORTATION SAFETY COMMITTEE
REPUBLIC OF INDONESIA**

FINAL
KNKT.15.12.10.03

Marine Safety Investigation Report
Collision between
Antigua and Barbuda Registered
General Cargo *THORCO CLOUD*
and Cayman Islands Registered
Tanker *STOLT COMMITMENT*
Singapore Strait 16 December 2015



2018

The report is based upon the investigation carried out by the KNKT in accordance with IMO Resolution MSC. 255 (84) and Indonesian Shipping Act (UU No.17/2008).

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NATIONAL TRANSPORTATION SAFETY COMMITTEE

Thorco Cloud – Stolt Commitment, Singapore Strait, 16 December 2015

Disclaimer

The report is issued based on the investigation carried out by the KNKT in accordance with

1. Indonesian Shipping Act no 17 Year 2008, chapter 256 and 257 along with its explanatory;
2. Indonesia Government Regulation No 62 Year 2013 on Transport Accident Investigation;
3. President Regulation No 02 Year 2012 on the Komite Nasional Keselamatan Transportasi; and
4. IMO Resolution MSC.255 (84) on Casualty Investigation Code.

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Jakarta, December 2018

**NATIONAL TRANSPORTATION
SAFETY COMMITTEE**

Chairman



Dr. Ir. SOERJANTO TIAHJONO

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NATIONAL TRANSPORTATION SAFETY COMMITTEE

Thorco Cloud – Stolt Commitment, Singapore Strait, 16 December 2015

I. FACTUAL INFORMATION

I.1. THE ACCIDENT

I.1.1. Course of the Accident

On the 16th December 2015, at around 17.00 LT¹, the loading of a general cargo vessel, *Thorco Cloud*, was completed at Batu Ampar Port. Later on, the agent of *Thorco Cloud* asked the Indonesia Port Corporation I, Branch of Batam, to guide the ship while departing. *Thorco Cloud* was bound for Port of Durban (Za Dur), West Africa.



Figure 1: *Thorco Cloud* whilst approaching the TSS (source: Batam VTS)

At 17.45 LT, the Pilot boarded the *Thorco Cloud*. Around 25 minutes later, the ship departed the port and sailing towards the TSS of Singapore Strait. Her speed, course over ground (COG) and heading were around 11 knots, 292°T and 291°T, respectively.

At 1835 LT, right after the *Thorco Cloud* had passed the Batam outer buoy, the Pilot disembarked the ship to the pilot boat named *Selat Kijang 01*. Afterwards, the Pilot went back to the Pilot Office in Batam.

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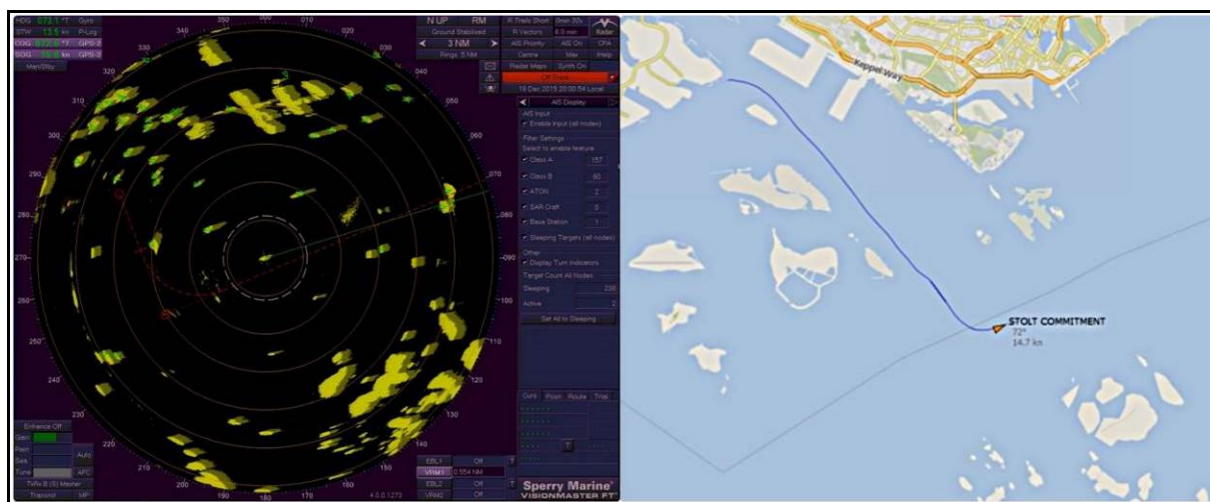


Figure 2: *Stolt Commitment* whilst sailing on the TSS (source: *Stolt Commitment's* VDR and Marine Traffic)

Meanwhile, a tanker vessel, *Stolt Commitment*, was sailing on the TSS heading easterly. She had departed from Singapore Port and was heading for the Port of Kaohsiung, Taiwan. The Second Mate and a couple of crew of *Stolt Commitment* were standing by to mitigate the

¹ West Indonesian Time (*Waktu Indonesia Barat*) is UTC +07:00.

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pirate hazard. At that time, her speed, COG and heading were around 15 knots, 072°T and 073°T, respectively.

At around 1955 LT², the Officer on Watch (OOW) of *Stolt Commitment* came up to the bridge to undertake his duty. He was standing next to the starboard radar which was set to 3 NM range. The Helmsman was focusing on the steering. The Chief Mate of *Stolt Commitment* was in the chart room.



Figure 3: Wavemaster 9 & Thorco Cloud on Stolt Commitment's radar

On board the *Stolt Commitment*, the OOW checked the situation through radars regularly. Right before *Stolt Commitment* altered to left (from Singapore to join the TSS easterly), *BTS Elizabeth* was the first ship spotted on the radar target data. Soon after the *Stolt Commitment* completed left turning, *Wavemaster 9*, which was crossing *Stolt Commitment's* bow with the speed of 22 knots, was targeted as well. Later on, *Gulf Cobalt* was focused on the radar target. Finally, *Target 867* was clicked by the OOW on the radars. At this time, the *Thorco Cloud* was sailing approaching the *Stolt Commitment* and both of them did not reduce the speed.

The Master of *Stolt Commitment* inspected the situation outside the vessel from the bridge and found everything was still according to the plan. Similarly, there were no suspected or unusual matters found by any crew of *Stolt Commitment*. Although the Captain of *Stolt Commitment* could check other ship's position nearby, he did not check the *Target 867's* position which was on her starboard side. The weather at the time was slight rain, yet the visibility was still reasonably good without any fog.

At around 20.10 LT, the OOW was checking a target on the radar named Target 867 as shown in Figure 3. Initially, the radar system showed no name for the target 867. But thereafter, the radar system showed it as the *Thorco Cloud* when the range was 0.92 NM.

At around 20.12 LT, the Master of *Stolt Commitment* asked the OOW to check the CPA of *Thorco Cloud*. The OOW then informed the Master that the closest point approach (CPA) of *Thorco Cloud* was zero (0) nautical mile as shown in Figure 4. At that time, the distance between both



Figure 4: The CPA between Stolt Commitment and Thorco Cloud was zero

² The local time (LT) here onwards is Singaporean Time which is UTC +08:00.

vessels was 0.8 NM. However, the Captain of *Stolt Commitment* did not order the crew to alter the course or reduce the speed.

At the last moment, both ships altered their heading. The *Thorco Cloud* altered hard to starboard (from 290°T to 315°T), while the *Stolt Commitment* also altered hard to port side (from 073°T to 058°T).

Shortly afterwards, the *Thorco Cloud* was hit at the port side hull by the bulbous bow of *Stolt Commitment*. As the consequence, the *Thorco Cloud* was dragged towards the northeast. Soon after the collision, a bridge crew of *Stolt Commitment* activated the alarms and rang the Singapore VTS via radio to report the accident. The Master of *Stolt Commitment* then ordered the engine crew to stop the engine and to render any assistance to the survivors.

I.1.2. The Aftermath

At around 20.13 LT, the collision between *Thorco Cloud* and *Stolt Commitment* occurred at 1°12.2' N and 103°54.1' E or around 5 NM from Batam Port in Indonesian waters. The bulbous bow of *Stolt Commitment* collided the port side of *Thorco Cloud* between midship and accommodation room. As the result, the *Thorco Cloud* was broken into two parts, specifically fore and aft parts.



Figure 5: The bulbous bow of Thorco Cloud

Around 9 minutes after the collision, the AIS signal from *Thorco Cloud* disappeared. The aft part sank first, while the fore part was floating in which the bulbous bow was facing upward.

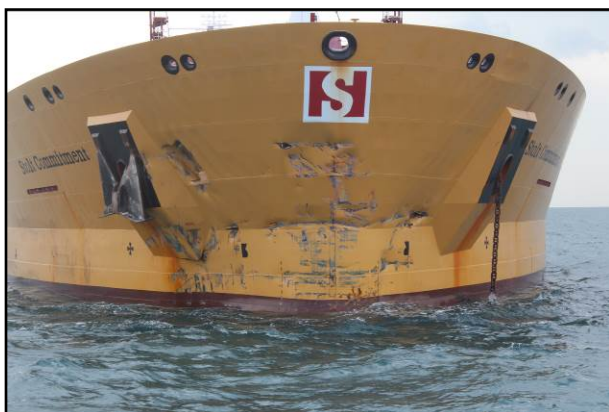


Figure 6: Minor damage on Stolt Commitment due to the collision

In the noon of the next day after the collision, the last part of *Thorco Cloud* completely sank into the Singapore Strait waters. Those parts sank at around position 1°12'21.06" N and 103°54'10.44" E or around 0.17 NM from the collision site.

At this collision, only the crew of *Thorco Cloud* were affected from the accident. Initially, 6 crew were missing and 6 others had survived. A couple of hours after the occurrence, the 5-missing crew were found

deceased. A few days after, the last missing crew member was found deceased as well. Therefore, there were 6 crew fatalities resulted by the accident.

On the other hand, *Stolt Commitment* suffered minor damage on her bulbous bow and the haws pipe of starboard side as seen in Figure 6. She was in a stable condition because the damage did not allow water to ingress into the spaces forward of the collision bulkhead. After the joint investigation (the MPA Singapore and the NTSC Indonesia) had been done, the ship continued the voyage to Singapore to be checked by the marine surveyor.

I.2. PARTICULARS OF THORCO CLOUD

At the time of the accident, the Antigua and Barbuda registered General Cargo Ship, *Thorco Cloud* (IMO number 9290050) was operated by Danish Shipper Thorco Shipping. She was manned by twelve crew at the time.



Figure 7: Thorco Cloud (source: Fleetmon)

She was built at Damen Shipyards in Galati, Romania in 2004 and classed into Det Norske Veritas (DNV) & Germanischer Lloyd (GL). Her length overall (LOA), breadth moulded (BM) and draught maximum height (H) were 145.63 m, 18.36 m and 7.8 m, respectively. Her deadweight was 10,385 tonnes.

I.3. PARTICULARS OF STOLT COMMITMENT

The Cayman Islands-flagged oil or chemical tanker *Stolt Commitment* (IMO number 9168647) was built at Stx Norway Floro AS in Norway in 2000. She is classed into Det Norske Veritas



Figure 8: Stolt Commitment

(DNV) and registered at the Port of George Town.

At the accident time, she was operated by Stolt Tankers BV and owned by Stolt Commitment BV. Her dimension of length overall (LOA), breadth moulded (BM), draught and were 183.10 m, 32.20 m, 10.80 m, respectively. Her dead weight is 37,438 tons.

I.4. MARINE TRAFFIC IN SINGAPORE STRAIT

The Singapore Strait, is a busy channel connecting Malacca Strait and the South China Sea. Refer to Encyclopaedia Britannica (1998), the strait which has a length of approximately 65 NM (105 km) is passed by hundreds of vessels. On average, more than 50,000 ships cross the straits annually (Martin and G, 2010).

Various types of vessels cross the strait, such as container, general cargo, bulk carrier, tanker, LNG/LPG and Ro-Ro vessels. From a one-month record of AIS data, the gross tonnage (GT) vessel distribution shows that tanker vessels with gross tonnage of 30,000 GT —like the *Stolt Commitment*—cross the channel around 150 times monthly (Qiang Meng, Jinxian Weng, 2014). Despite this it is not the most frequent type of ship to cross the territory. The same data also shows that the 10,000 GT sized vessels —vessels that resemble the *Thorco*

Cloud— are the most common size to cross the strait. It has been recorded that they pass over the channel 325 times.

The Traffic Separation Schemes (TSS) is applied to the Singapore Strait to enhance the marine safety in the area. The TSS divides the strait into two sections. Ships heading easterly will be sailing on the southern part of the TSS; westbound ships will be passing along the north part of the TSS as shown in Figure 9.



Figure 9: TSS checkpoints

Refer to the Safety of Navigation in the Singapore Strait issued by the Maritime and Port Authority of Singapore in 2006, the checkpoints of the TSS are spread along the strait at 01°12.51'N/103°52.15'E, 01°11.59'N/103°50.21'E, 01°11.13'N/103°49.08'E and 01°08.65'N/103°44.30'E as depicted by Figure 9.

The operation of the marine traffic in the Singapore Strait is currently under Singapore Vessel Traffic Information System (VTIS), despite Indonesia having its own VTS system in Batam. Every ship which is going to join the TSS should report to the Singapore VTIS.

II. ANALYSIS

II.1. LOOKOUT, RISK OF COLLISION AND ACTION TAKEN

II.1.1. Stolt Commitment

There was no obstruction on visibility due to the weather, physical ability or window on the bridge of *Stolt Commitment*. All crew on her bridge could see any ships surrounding, particularly on their starboard side.

Both the Master and the OOW of *Stolt Commitment* acknowledged that their ship supposed to give way to the *Thorco Cloud*. However, as the *Stolt Commitment* was on the TSS, the Master of *Stolt Commitment* thought that the *Stolt Commitment* has the priority over the *Thorco Cloud* which was off the TSS. Furthermore, in reference to the interview, this point of view developed an



Figure 10: The situation on the bridge of *Stolt Commitment* towards the starboard side

assumption that the *Thorco Cloud* will give way to the *Stolt Commitment*, even though the *Thorco Cloud* was on their starboard side.

According to the Convention on the International Regulations for Preventing Collisions at Sea (International Maritime Organization, 1972), a vessel which sees another vessel on their starboard side should give way. In accordance with Rule 15 (crossing situation), when *Stolt Commitment* and *Thorco Cloud* were in a crossing situation, the *Stolt Commitment* should take action to cross from the aft of *Thorco Cloud*. Further, in accordance with Rule 16 (action by the give way vessel), the *Stolt Commitment* should take early and substantial action to keep well clear. At this accident, the *Stolt Commitment* began to alter in last minute, to be exact when the Time to Closest Point of Approach (TCPA) was less than one minute and when the collision of both vessels was inevitable.

At this accident, the Master of *Stolt Commitment* thought that any ships sailing on the TSS are superior to the other ships while off the TSS. Therefore, the Master did not take any give

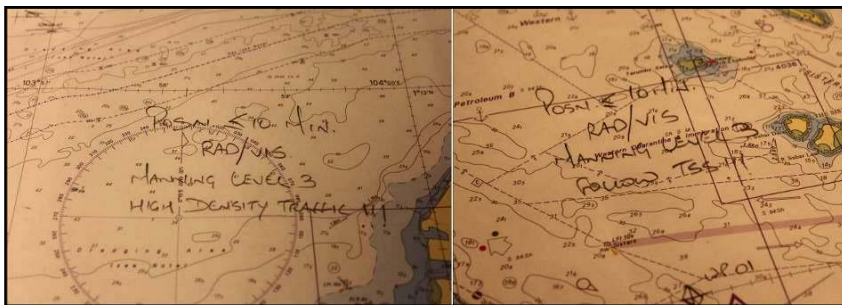


Figure 11: The note given on the chart of *Stolt Commitment*

way action to avoid collision with the *Thorco Cloud*. This decision was a contrary action to the Rule 10a (traffic separation schemes) which states that the TSS does not diminish any mandatories to any ships sailing on the TSS. Hence, the *Stolt Commitment* still

should give way to the *Thorco Cloud*, despite the *Thorco Cloud* was not on the TSS.

Before the voyage, they planned to pass the Singapore Strait with the manning level set to level 3. There were a couple of notes regarding the high-density traffic in the Singapore Strait to anticipate any consequences derived by the considerable number of vessels crossing the channel as in Figure 11. However, the notes were not effective as she was sailing nearly at her top speed. With the speed as in an open sea, it is more difficult for the ship to take any action in avoiding the collision.

II.1.2. Thorco Cloud

The same as on the *Stolt Commitment* bridge, the visibility on the *Thorco Cloud* was clear. The crew had nothing blocking their vision.

Compared to the *Stolt Commitment*, in accordance with the Rule 15 (crossing situation), the *Thorco Cloud* had the right to maintain her course to join the TSS. At this accident, the *Thorco Cloud* maintained her course very well until the last minute before the collision. In accordance to the Rule 17 (action by stand-on vessel), when the stand-on

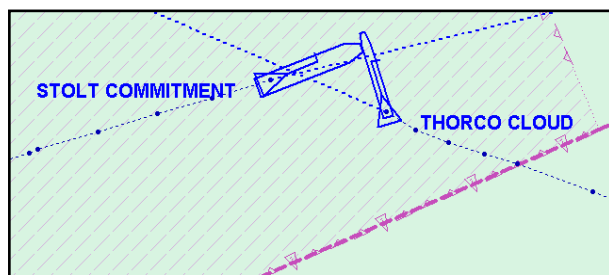


Figure 12: Both vessels whilst the collision (source: Batam VTS)

vessel (*Thorco Cloud*) finds that the give way vessel (*Stolt Commitment*) cannot take an action alone, the stand on vessel should take an action to avoid collision in an adequate time by considering her speed and the distance to the surrounding situation. Despite the *Stolt Commitment* altering to the port side which was correct to reduce the collision impact, the action was taken in the latest time which gave both vessels no time to avoid the collision as depicted on Figure 12.

II.2. OTHER SAFETY ISSUE

The collision created another safety issue in the safety of navigation. After the accident, the wreckages of *Thorco Cloud* remained beneath in the strait. This hazard is considered as a high profile hazard concerning the dense traffic in the area, particularly for the deep ships as well as tanker, chemical and hazardous carriers.

Although until today there is no report of a claims or accidents resulted by the wreck, safety action to remove the remain bodies of *Thorco Cloud* is extremely needed. This action could be done by the shipowner under the supervision of the Directorate General of Sea Transport. In addition, the risk assessment and impacts related to the wreck removal process should be conducted correctly.

Refer to the Minister of Transportation Regulations No. 71 Year of 2013 on Salvage, Article 9 stated that the wreckages location of *Thorco Cloud* categorised as the Obstacle of Level II in which the wreckages are out of the working region of Batam Harbur Master and the depth of them is less than 100 m. Refer to the rule, the wreckages should be removed within 90 days. However, the wreckages remain there for more than three years.

III. CONCLUSION

III.1. FINDINGS

The collision between *Thorco Cloud* and *Stolt Commitment* was due to the crew of both vessels not applying the COLREGs rules properly. This led to the insufficient time for them to avoid the collision.

IV. RECOMMENDATION

From the analysis and conclusion chapters aforementioned above, the National Transportation Safety Committee (NTSC) Republic of Indonesia recommends below recommendations to the interested parties to prevent reoccurrence of the accident due to the same factor in the future.

NATIONAL TRANSPORTATION SAFETY COMMITTEE

Thorco Cloud – Stolt Commitment, Singapore Strait, 16 December 2015

IV.1. DIRECTORATE GENERAL OF SEA TRANSPORT, MINISTRY OF TRANSPORTATION, REPUBLIC OF INDONESIA

1. To ensure the removal of wreckage of *Thorco Cloud* to be carried out appropriately.

Status: **Open**

IV.2. DANISH SHIPPER THORCO SHIPPING

1. To remove the wrackage of *Thorco Cloud*.

2. To ensure the seafarer's knowledge regarding the COLREGs related to TSS is updated.

Status: **Open**

IV.3. STOLT COMMITMENT BV

1. To ensure the seafarer's knowledge regarding the COLREGs related to TSS is updated.

Status: **Open**

SOURCES OF INFORMATION

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Voyage Data Recorder of *Stolt Commitment*.

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