MINISTRY OF ECONOMY AND SUSTAINABLE DEVELOPMENT OF GEORGIA
TRANSPORTATION SAFETY INVESTIGATION BUREAU

Investigation report of the maritime incident (grounding) of the dry cargo vessel under the Panamanian flag MV SUN S, in the coastal restricted area of the port of Poti 12.18.2024.

TBILISI- 2025

Brief summary

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The main purpose of marine casualty investigation is to determine all contributing factors, cause and outcome, to evaluate the actions of persons involved in such incidents and to determine and create preventive measures to eliminate such incidents in the future.

General Information

1. Factual information

1.1Incident history

On December 16, 2024 at 14:00p.m. (local time here and below), the Poti Port State Supervision and Control Service (PSC), due to difficult meteorological conditions, recommended that ships standing in the port roadstead go out to the open sea (neutral waters) for safety reasons.

18.12.2024 at 08:3a.m. the dry cargo vessel MV SUN S, sailing under the Panamanian flag, was removed from anchorage #300 of the Poti Port in order to go out to the open sea for storming (for safe drifting in a storm) due to difficult weather conditions.

10:30a.m. the captain of the MV SUN S reported to the Poti Port Vessel Traffic Service (VTS), that after pic up anchor the ship was unable sailing in the open sea direction, due to strong wind and waves (wind 15-20 m/s, sea 6-7 force). In order to stop the drift, the ship at 10:57a.m. dropped starboard anchor 7 shackles, in the position LAT.42°10.6'N, LONG. 041°37.9'E, at 500 meters from the shore. Later at 11:57a.m. dropped port anchor 3 shackles into the water and requested tug assistance to bring the ship to safe waters, which was not possible under the current weather conditions.

At 14:25p.m. the captain of the MV SUN S reported to the VTS of the Port of Poti that the ship had run aground. Later, at 17:15p.m. the captain of the ship reported that the ship was not running aground and was afloat.

At 08:30a.m. on 19.12.2024, the captain of MV SUN S officially notified the Harbor master Port of Poti, that the ship was aground with his starboard side, at the position LAT.42°10.6'N, LONG.041°37.9'E. The ship had lost its rudder and requested a tug for assistance. According to the PSC, due to difficult weather conditions (wind 18 m/s, waves 4m), the tug's work to remove the ship from sallow water was not possible.

On 20.12.2024 at 10:30a.m. the Harbor master Port of Poti, representatives of the insurance company and the salvage company were able to conduct an external surface inspection of the MV SUN S using from a boat. The PSC and VTS operators had permanent communication with the vessel. According to the captain of the vessel, the watertightness and the crew of the vessel was well.

On 21.12.2024, an agreement was reached between the shipowner and the Poti Port PSC on the planning of salvage operations. It was decided to involve the powerful salvage tug TS ATLANTIC POWER in the salvage operations.

On 22.12.2024 at 14:00p.m. TS ATLANTIC POWER arrived in the port of Poti, anchored in area #200 and began preparations for the agreed operations to remove the MV SUN S from aground.

From 23.12.2024 to 28.12.2024 TS ATLANTIC POWER's efforts to remove MV SUN S from aground were unsuccessful for various reasons.

On 29.12.2024, at 23:10p.m. tugboat TS ATLANTIC POWER managed to refloat MV SUN S.

23:35p.m. TS ATLANTIC POWER towed MV SUN S for anchoring in area No. 300ю

On 31.12.2024 at 12:10 p.m. the underwater hull of the MV SUN S was inspected. The inspection confirmed the loss of the ship's rudder blade, damage to the ship's propeller, and minor damage to the 5th ballast tank and the ship's bulb.
The marine incident was reported to the Maritime Transport Agency, the Rescue Coordination Centre and the Transport Safety Investigation Bureau by the duty officer of the State Port Supervision and Control Service.

Investigation commenced:	20.12.2024
Investigation completed:	20.01.2025

1.2. Human injury

The crew members of the MV SUN S were not injured during the incident.

1.3. Vessel damage

An inspection of the ship's underwater hull confirmed the complete loss of the ship's rudder blade. The balanced rudder stock was found to be in satisfactory condition, although a detailed inspection in dry dock is recommended. The flange connecting the rudder loop and the horizontal blade was found in place, although the bolts were not found in place.

#3- View of the flange coupling the rudder blade with rudder stock

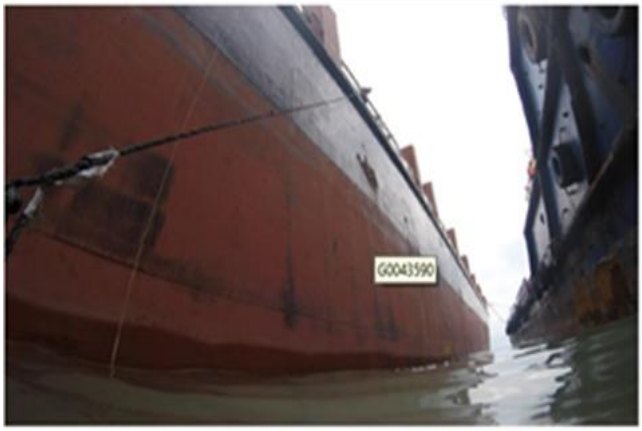
#4- View of deformed propeller blade

The underwater survey revealed damage to the ship's propeller, with the four-bladed fixed-pitch propeller severely damaged. All blades showed significant deformation, multiple cracks and numerous scratches along the leading edges, indicating contact with an external object. This resulted in the complete loss of the propeller's original geometry. The propeller boss and its connection to the tail shaft were visually assessed and found to be free of significant damage and required drydocking.

#17- View of the deformed blade

#18- Deformed edges

#5 Double ballasted bottom tank was inspected twice as thoroughly as possible, considering the weather and limited visibility. No significant penetration or major damage was observed. However, numerous dents and new scratches were noted, extending to bare metal. Close-up inspection in dry dock is recommended to check for microcracks in the welds.



#83- Starboard Side , area of DBT 5 STb.

#84- Bottom Shell plating

Minor damage was observed on the ship's bulb, including paint loss, scratches, and wear consistent with contact with the seabed.

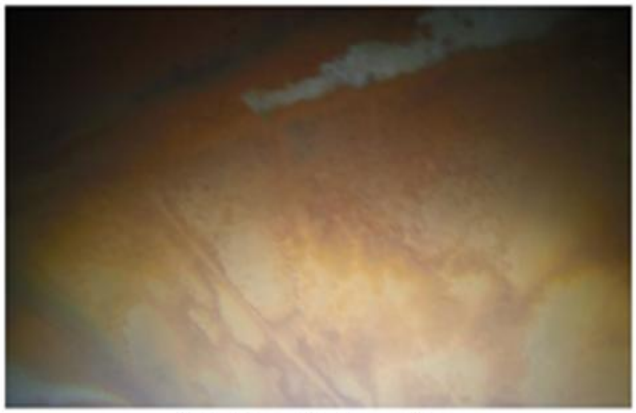
#53- Bulb bow area

#54- Bulb bow area

1.4. Other damage

The underwater survey revealed minor scratches on the ship, in the area of repairs made to the ship's hull during the ship's previous docking.

#55- Previous repairs



#56- View of hull condition

1.5 Technical information of the vessel and tugs involved in the Incident.

MV SUN S

IMO # 9473975

Call Sign 3FB26

MMSI 370399000

Flag state PANAMA

Length overall L =101, 8m

Breadth B =15.8 m

Drought d = 5.6∂

Deadweight 5424,5mt

Year of Built 2006

Gross tonnage 3798

Net tonnage 2156

Main Engine characteristics-8328ZCd -6, 2799/390RPM

Mai Engine Power – 2060. KWT

Port of Origin - Panama.

Tug boat TS ATLANTIC POWER

IMO # 9369552

Call sign 3EXY

MMSI 372607000

Length over all =63.4m

Breadth B =15.8m

Draft = 4.8m

Deadweight 1664,7mt

Year Built 2007

Gross Tonnage GT 1943

Net tonnage 650

Flag state - Georgia

Port of Origin – Panama

Mine Engine Characteristics -3x2400Kw

Power – @BHP3250KWT

Number of Engines – 2.

1.6 Meteorological Information

№ WF/6623 18 / დეკემბერი / 2024 წ.

პროგნოზი

18/12/2024 წ. 10:00 სთ-დან 19/12/2024 წ. 10:00 სთ-მდე	ფოთი Poti		ყულევი Kulevi	
	დღე	ღამე	დღე	ღამე
ქარი (სიჩქარე) მ/წმ Wind (speed) m/s	15-20	8-13	12-17	6-11
შენიშვნა Note	დაქროლვა Of gust 25-30	დაქროლვა Of gust 15-17	დაქროლვა Of gust 20-25	დაქროლვა Of gust 13-15
ქარი (მიმართულება) Wind (direction)	დასავლეთი Westerly	დასავლეთი Westerly	დასავლეთი Westerly	დასავლეთი Westerly
შენიშვნა Note	დღის ბოლომდან Until the end of the day 10-15 დაქროლვა Of gust 17-20	დილით ცვალებადი In the morning Variable 6-11	დღის ბოლომდან Until the end of the day8-13 დაქროლვა Of gust 15-17	დილით ცვალებადი In the morning Variable 5-10
ზღვის ფაზა (ბალი) Sea State	6-7/5-6	5-6/4-5	6/5-6	5-6/4-5
ტალღის სიმაღლე (სმ) Wave height (sm)	400-700/250-550	250-450/170-350	400-600/250-450	250-450/170-300
შენიშვნა Note	ნიჩქრება Rip currents	ნიჩქრება Rip currents	ნიჩქრება Rip currents	ნიჩქრება Rip currents
ხილვადობა (მილი) Visibility (Miles)	5-10/1-3	5-10	5-10/1-3	5-10
ღრუბლიანობა Cloudness	მოღრუბლული Cloudy	ძირითადად მოღრუბლული Mostly cloudy	მოღრუბლული Cloudy	ძირითადად მოღრუბლული Mostly cloudy
ტემპერატურა (ჰაერის) °C Air Temperature °C	9-11	6-8	9-11	6-8
ტემპერატურა (ზღვის) °C Sea Temperature °C	12-14	12-14	12-14	12-14
ნალექი Precipitation	დროგამოშვებით წვიმა Occasionally rain	უმეტესად უნლექოდ Mainly dry	დროგამოშვებით წვიმა Occasionally rain	უმეტესად უნლექოდ Mainly dry
შენიშვნა Note	დღის 1ნახ. ძლიერი წვიმა At the first half of the day heavy rain		დღის 1ნახ. ძლიერი წვიმა At the first half of the day heavy rain	

ხინოსტატისი ტატიანა გარაბეგა

The actual weather conditions in the port of Poti are related to the incident.

1.7 Fire

There was no fire during the incident on the heated vessel MV SUN S.

1.8 Environmental Pollution

There was no environmental pollution during the incident on the MV SUN S.

1.9 Rescue factors

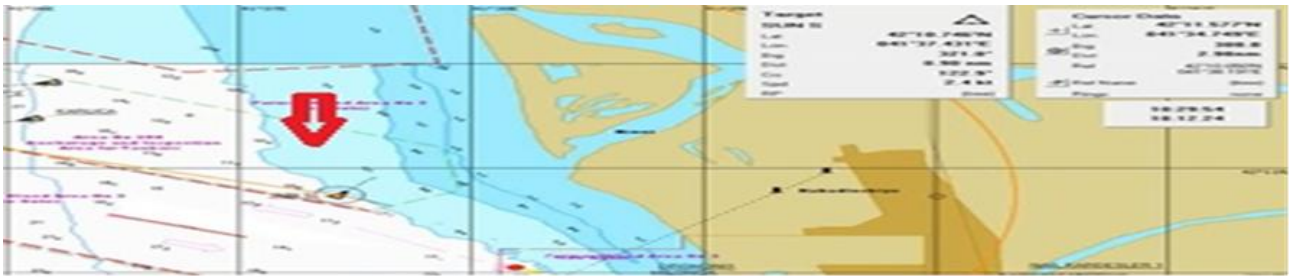
During the incident on the MV SUN S, the crew members of the vessels and tugboats involved in the incident, as well as the service personnel of the Poti terminal, were not injured.

2. Analysis

Analysis of incident happened 18.12.2024 is based on:

- Maritime Codex of Georgia;
- "Rules for the official investigation of transport accidents and incidents occurring in the fields of maritime and inland waterway transport";
- "Technical Regulations" "Port Rules"
- Statement provided by the Harbor master of Poti Seaport;
- Statement provided by the Master of the MV SUN S;
- Logbook entries of the rescue tug TS ATLANTIC POWER;
- Logbook entries of the MV SUN S;
- Incident report provided by the Maritime transport agency of Georgia;
- Recording of the VTS and AIS;
- Weather report provided by the State hydrographic office of Georgia;
- Interview provided by the various department members in the management of Port of Poti;
- Based on the study of international best practices implemented in the field of maritime transport.

As a result of the Study and analysis of the information received and submitted for the investigation of the incident, on January 18. 2024 according the recommendation of the State Supervision and Control Service (PSC) of the port of Poti, due to bad weather conditions (wind 15-20 m/s, wave 6-7 points), the vessel MV SUN S, sailing under the Panamanian flag at 08:35a.m. pic up anchor at No. 300 anchorage area, with the purpose of going out to open sea. The main purpose was the drift of the vessel in conditions of strong waves and strong winds, which is used by seafarers in accordance with the accepted practice of safe navigation.

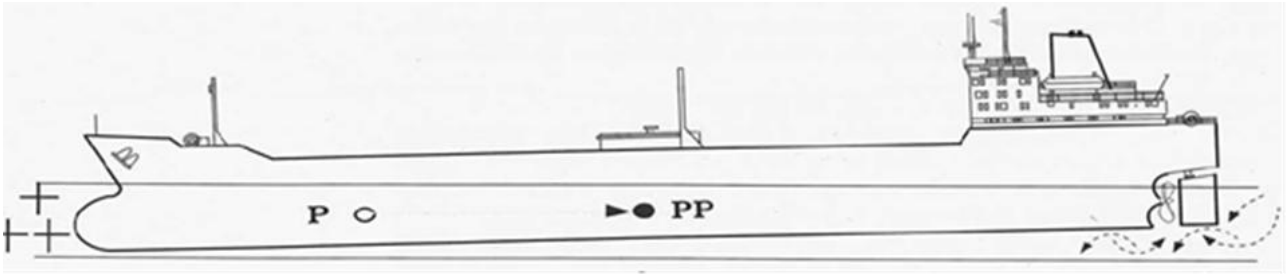


10:30a.m. The captain of the MV SUN S reported to the Poti Port Vessel Traffic Service (VTS) that after pic up anchor the ship was unable to sail in the open sea direction, due to strong wind and waves (wind 15-20 m/s, sea 6-force),. In order to stop the drift, the ship at 10:57a.m. dropped starboard anchor 7 shackles, in the position LAT.42°10.6'N, LONG. 041°37.9'E, at 500 meters from the shore. Later at 11:57a.m. dropped port anchor, 3 shackles into the water and requested tug assistance to bring the ship to safe waters, which was not possible under the current weather conditions.

13:45p.m. according to the captain of the ship, attempts to maneuver with the engine and rudders were unsuccessful, the ship is drifting and moving towards the shore. At the request of the shipowner, the captain once again requested tug assistance, which was not possible due to difficult weather conditions (wind 20 m/s, waves 5 force). 14:25p.m. the captain of the MV SUN S reported to the VTS of the Port of Poti that the ship had run aground on a keel, later at 17:15p.m. according to the captain of the ship, the ship is not aground and is afloat, moving.

18:34p.m. by the decision of the captain, the MV SUN S began to pic up the anchors, and at the same time, in response to the question posed by the VTS, confirmed the working condition of the engine, rudder and propeller. 18:45p.m. the ship finished pic up both anchors and continued maneuvering with the engine in order to go out to open sea. All attempts by the ship to turn around by turning the rudder to the maximum angle were unsuccessful. 19:16p.m. when asked by the Harbor master , why the ship was moving towards the shore, the captain of the MV SUN S explained that the ship could not turn towards the open sea, the ship's engine could not cope with the strong wind and waves.

19:20p.m. the MV SUN S dropped 6 shackles anchor on the starboard side, with a purpose to stop the vessel from moving towards the shore.
22:32p.m. when asked by VTS whether the vessel was aground or not, the captain replied that the vessel was not aground, but was afloat, and the depth under the keel, as measured by the echo sounder, was 3.5 meters.
23:23p.m. in response to the question from the maritime agency security service whether a sounding sheets had been made around the vessel, the captain of the MV SUN S replied that given the swell, 3.5 meters were recorded at the stern, but it was impossible to take measurements at the bow due to the strong swell. According to the captain, the vessel's engine is running, but the vessel cannot counteract with the strong wind and swell.
Remark 1. The loss of maneuverability of the vessel indicates that due to contact with the ground the vessel lost the rudder blade and damaged the propeller, which was confirmed by underwater inspection later. When sailing in shallow water, the area of water between the keel and the sea bottom decreases, which increases the speed of water movement in the same area. Due to the increase in speed, according to the Bernoulli equation, the hydrodynamic pressure will be low. The resulting vertical force presses the vessel's hull to the ground.



Remark 2. A malfunction of the ship's echo sounder is indicated by incorrect depth readings displayed by the echo sounder in a given area, taking into account the depth shown on the chart and the ship's draft.

On 19.12.2024, at 08:30a.m. the duty officer of the State Supervision and Control Service of the Port of Poti received a report from the captain of the MV SUN S that the ship's keel had run aground with its starboard side on a reef at geographical coordinates LAT.=42°10.6'N, LONG.= 041°38.6'E, north of the Port of Poti. As a result of the vertical amplitude of strong waves, the ship lost its rudder due to frequent contact with the ground, while the watertightness of its hull was not impaired.

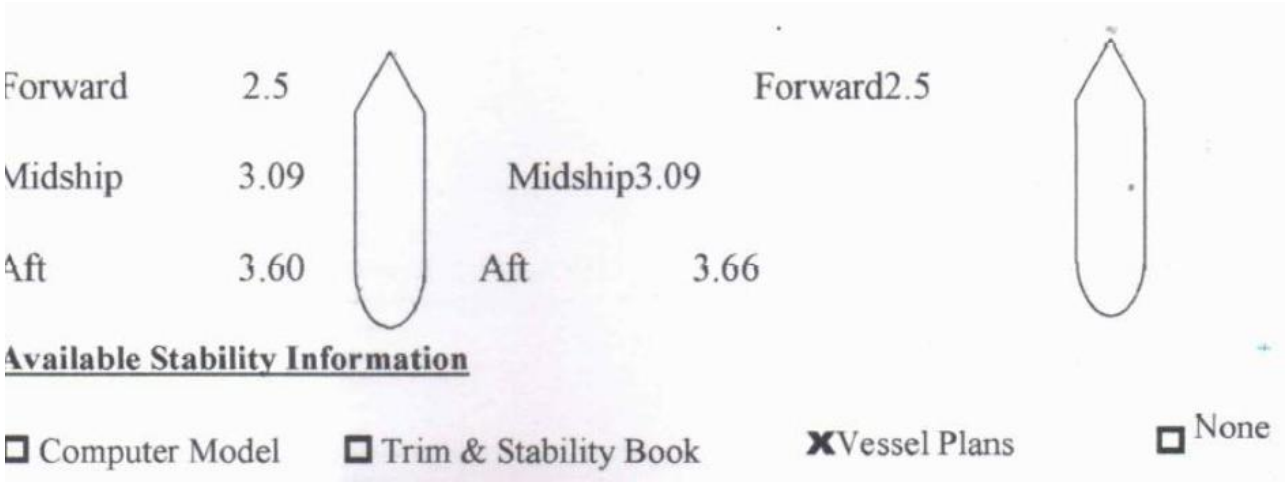
The technical manager of the shipowner company of the MV SUN S and the captain of the ship requested the assistance of a tugboat to remove the vessel from being aground, but due to difficult weather conditions (wind 18 m/s, waves 5 force), the tugboat was unable to reach the ship. According to the **Port Rules, Chapter XVIII - Port of Poti, Article 100, paragraph 3**, "*It is prohibited to conduct tugboat operations in the Port of Poti if the wind speed exceeds 17 (seventeen) m/s (7 force on the Beaufort scale). In case of failure of the ship's rudder, propeller and main engine, tugboat operations are permitted if the wind speed does not exceed 10 (ten) m/s (5 force on the Beaufort scale).*"

Despite the difficult weather conditions, on 20.12.2024, at 10:00a.m. the Harbor master together with representatives of the insurance company and the salvage company, they were able to approach the ship that was aground. A surface inspection of the vessel was carried out. The captain was in constant communication by radio.

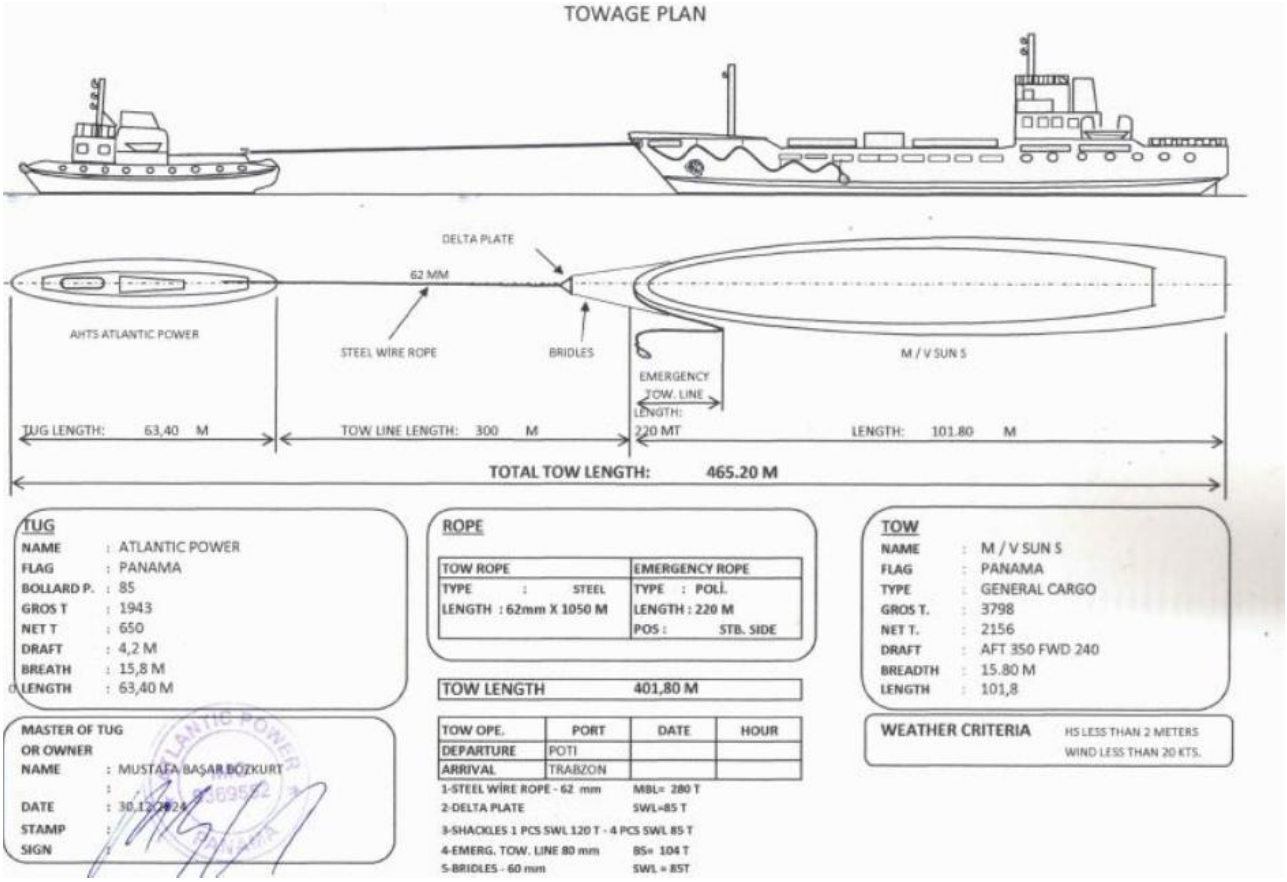
During 21.12.2024 due to bad weather, it was not possible to carry out a rescue operation to remove the vessel aground.

An agreement was reached between the shipowner company of the MV SUN S and the management of the Poti Port State Supervision and Control Service (PSC) on the joint conduct of salvage operations. In order to conduct salvage operations, the shipowner company called in the powerful rescue tug TS ATLANTIC POWER.

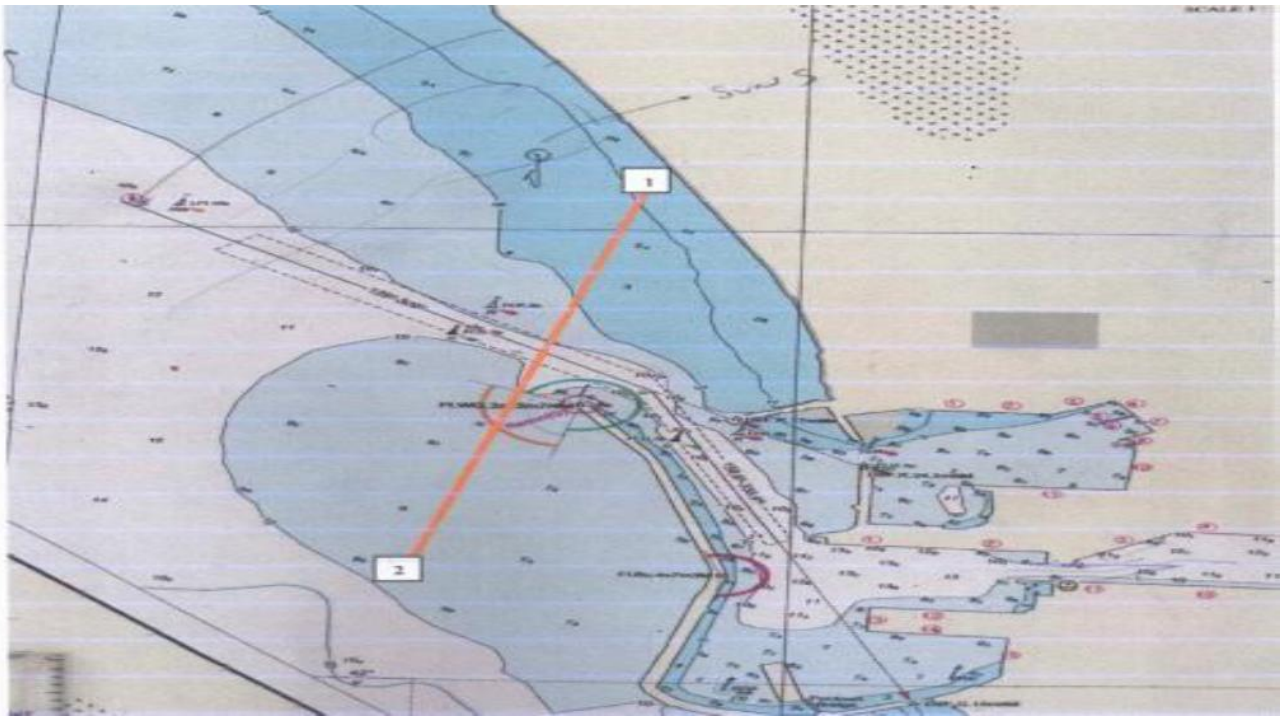
On 22.12.2024, at 14:00p.m. the rescue tug TS ATLANTIC POWER entered the port of Poti and drop anchor at the anchorage #200. The tug captain presented the plan for the salvage operations to remove the MV SUN S from aground. The difficulty of the rescue operations was the factual information that the entire hull of the ship was sitting on the aground (ground is sand).



According to the salvage operation plan, first of all, the MV SUN S was to be prepared, de ballasted, and the holds emptied in order to achieve maximum lightness of the ship. Depending on the current situation, the rescue tug TS ATLANTIC POWER was to attach two tow ropes from the ship's bow side locks or from the ship's stern side locks. By means of the tow ropes, the ship was to be removed from the mooring by means of the horizontal rocking effect of the ship and by means of a powerful tow.



According to the salvage plan, after removing the MV SUN S from the mooring, the salvage tug TS ATLANTIC POWER was to tow it anchorage #300 for the purpose of investigating the damage to the ship, from point #1 to point #2 in the picture.



On 23.12.2024, at 11:35a.m. the MV SUN S, in accordance with the salvage operation plan, began de ballasting the ship and emptying the holds. At 13:20p.m. the TS ATLANTIC POWER attached the towing lines and began towing. At 13:30p.m. the salvage operations were suspended due to damage to the towing lines. On 24.12.2024, at 09:35AM the TS ATLANTIC POWER attached the towing lines. At 17:50p.m. the towing operation began to remove the ship from aground. At 18:40p.m. the operation was suspended due to bad weather.

On 25.12.2024 at 10:40a.m. the salvage operation resumed, however due to worsening weather conditions the tow lines could not be attached to the MV SUN S and the rescue operation was suspended at 18:00p.m..

On 26.12.2024 at 09:20a.m. the salvage operation resumed again. Towing failed due to the ship's hull being completely grounded. At 18:00p.m. the salvage operation was suspended due to TS ATLANTIC POWER running out of fuel oil.

On 27.12.2024 TS ATLANTIC POWER suspended the rescue operation awaiting fuel oil.

28.12.2024 at 14:35p.m. due to bad weather TS ATLANTIC POWER dropped anchor at anchorage No. 200 for receive fuel oil.

On 29.12.2024, at 14:00p.m. TS ATLANTIC POWER completed the bunkering and at 18:10p.m. it arrived at the point at coordinates LAT.42°09.0'N, LONG. 041°38.4'E with its stern towards the stern of MV SUN S, having attached tow ropes from two side hawse of the ship sitting on aground. As a result of achieving a horizontal oscillation of the ship by means of the ropes, at 23:10p.m. it was possible to remove MV SUN S from aground (REFLAOT). At 23:12p.m., TS ATLANTIC POWER towed the dry cargo ship MV SUN S to the anchorage #300.

At 23:35p.m. MV SUN S drop anchor for inspection the damage to the ship. The Head of the Port State Supervision and Control Service was constantly monitoring the rescue operations throughout the period.

31.12.2024 12:10p.m. the underwater hull of the ship MV SUN S was inspected.

As a result of the investigation, the loss of the ship's rudder blade, damage to the ship's propeller, and minor damage to the 5th ballast tank and the ship's bulb were confirmed.

At 14:05p.m. on 03.01.2025, in accordance with the one-time right of passage issued by the State Supervision and Control Service of the Port of Poti, the rescue tug TS ATLANTIC POWER towed MV SUN S from the Poti seaport anchorage #300 towards the port of Trabzon (Turkey).

Remark 3. It was not possible to obtain a Statement of Fact from the ship's captain for the investigation, and numerous requests to him were ignored.

Remark 4. The fixed time of the ship's grounding is different from the actual time of the grounding according to the information obtained:

- According to the PSC inspection report of the Black Sea Memorandum, the time of the ship's grounding is fixed at 08:30a.m. on 19.12.2024;

- According to the entry in the duty log of the duty officer of the State Port Supervision and Control Service, the time of the ship's grounding is recorded as 14:24p.m. on 18.12.2024;
- The ship's logbook records the time of the ship's grounding as 18.12.2024, 21:00 p.m.;
- According to VTS records, the official time of the ship's touching the ground is recorded as 08:30a.m. on 19.12.2024, and the grounding is recorded at 14:24p.m. on 18.12.2024, after which the ship was confirms that the ship is afloat.

The logbook submitted by the captain is filled with gaps, the times of the ship's various activities are not fixed, or do not correspond to the actual time. The report mainly used factual information from the VTS records.

3. Conclusion

Investigation of above stated incident based on the evidence available revealed:

- The actual weather conditions in the port of Poti are directly related to the incident;

The incident was caused by:

- The captain of the dry cargo ship MV SUN S, improperly planning and implementing the procedure for withdrawing the ship from the port of Poti and incorrectly assessing the expected risks;
- Ineffective use of primary actions to prevent the ship from running aground, incorrect calculation of the holding force anchor chain, and ineffective maneuvering.

The maritime incident that occurred, in accordance with the Table of Marine Incident/Case Categories in Appendix 1 of the “Rules for the Official Investigation of Transport Accidents and Incidents in the Fields of Maritime and Inland Waterway Transport”, is classified as a maritime incident - grounding of a ship.

4. Safety Recommendations

1. The report of the investigation of this maritime incident, in order to improve the level of navigation safety and prevent similar maritime incidents in the future, shall be sent for further response to:

a) The shipowner of the MV SUN S;

b) Maritime transport agency of Georgia;

c) Heads of the State Supervision and Control Services of the ports of Kulevi, Batumi, Poti, Supsa and recognized maritime educational institutions of Georgia;

2.All parties receiving this marine incident investigation report shall ensure that:

a) Detailed review of this report in the relevant departments;

b)The shipowner should tighten control over the full implementation of international and local regulatory requirements by the relevant personnel of subordinate ships and ensure timely response from the ship's crew in the event of an emergency.

c) The heads of the State Supervision and Control Services of the ports of Kulevi, Batumi, Poti, and Supsa shall ensure that, in the event of maritime incidents occurring in the territories under their jurisdiction, information from the Vessel Data Recorders (VDRs) and other types of data recorders, as well as copies of records from the ships' on-board technical logbooks, are promptly retrieved from the vessels involved in the incidents.

d) The Transportation Safety Board should be informed about the implemented recommendations.

Head of the Transportation Safety Investigation Bureau Kakhaber Gudiashvili