



## Technical report S-17/2012

# Investigation of the collision of vessel BESIKTAS PERA against the pier during the docking manoeuvre at the port of Valencia on the 22<sup>nd</sup> of October 2011.

### NOTICE

This report has been drafted by the Standing Commission for Maritime Accident and Incident Investigations, CIAIM, regulated by the Article 265 of the Revised Text to Law of the National Ports' (Puertos del Estado) and the Merchant Navy (Marina Mercante), approved by Royal Legislative Decree 2/2011, dated 5 September, and by Royal Decree 800/2011, dated 10 June, whose functions are:

1. To carry out the investigations and technical reports of all very serious maritime accidents in order to determine the technical causes that originated them and make recommendations for the purpose of implementing the necessary measures to prevent them from occurring in the future.
2. To carry out the technical investigation of serious accidents and maritime incidents when lessons learned can be obtained for maritime safety, to prevent marine pollution from vessels, and to produce technical reports and recommendations on the same.

In accordance with Royal Decree 800/2011, the investigations will not be conducted to determine responsibilities or fault. However, CIAIM will report the causes of the maritime accident or incident even though from its results, the fault or responsibility of individuals or legal entities may be inferred. The drafting of the technical report will in no way pre-judge the decision that may fall upon the courts of law, nor will it seek the assessing of responsibilities or determination of culpabilities.

The investigation included in this report has been conducted with no other fundamental purpose than to determine the technical reasons that may have caused the maritime accidents or incidents and make recommendations for the purpose of improving maritime safety and the prevention of vessel pollution in order to prevent maritime accidents from occurring in the future.

Therefore, the use of the investigation results with any purpose other than the one described is subject in all cases to the aforesaid premises and must not, therefore, prejudice the results obtained from any other report that, in relation to the accident or incident, may be initiated in accordance with current legislation.

The use made of this report for any purpose other than for the prevention of future accidents may lead to erroneous conclusions or interpretations.



## DETAILED DESCRIPTION

The following report of the events has been drafted based on statements provided by the crew and other documents. The times referred to in the report are local.



Figure 1. Location of the accident

### Chronology of the events

On the 22<sup>nd</sup> of October 2011, at 21:40 hours, vessel BESIKTAS PERA was docking at the Port of Valencia's North Pier after having supplied fuel to another vessel.

The Master, Pilot, First Deck Officer and a Sailor were at the wheelhouse as well as the Master's relief, who was enrolled as part of his ship familiarization period. As was standard practice on this vessel, the Master operated the steering and propulsion system controls.

When ordered, crewmembers on the stern attempted to throw the first line using a towrope but were unsuccessful because the stopper knot did not reach the pier and dropped into the water. The Third Deck Officer reported the incident to the wheelhouse and subsequently warned that the vessel had begun to move forward.

The Master was sure he had given a forward stroke, however the excessive headway was not justified since the engine control lever had not surpassed the halfway mark. Following the Pilot's recommendation, the Master put the levers slightly in reverse, then reverse at half power and finally full reverse. This action, however, did not prevent the vessel from moving forward. The Master and the Pilot noticed that the engine order telegraph was in the proper position and the command was repeated. They also observed that the engine RPM indication was unstable and that the vessel's speed was increasing considerably; therefore, the Master called the engine control room to report what was happening and subsequently gave the command to lower both anchors, of which only the port anchor lowered. Also, the Pilot contacted the tugs and requested their immediate assistance because "the engine was out of control, operating with throttles full forward.

When a collision with the Llovera Pier seemed to be unavoidable, the Master manoeuvred using the rudder and the bow propeller to cause the vessel to impact perpendicular to the pier in order for the bulb to absorb the impact, which occurred at 21:46 hours.

After the collision, the Master and the Pilot stated that the engine continued operating full forward for at least a minute until they were able to stop it, even though the engine order telegraph was set to full reverse.

After reporting the accident to the Port of Valencia's Emergency Coordination Centre, at 22:05 hours, three tugs towed the vessel to the North Pier, where it was docked at 22:30 hours.

As a consequence of the impact, vessel BESIKTAS PERA suffered damage to her bulb. This damage, however, did not affect the integrity or the water tightness of the forepeak's ballast tank. The damage did not affect the cargo tanks or cause any contamination.



During the days subsequent to the accident the vessel's steering and propulsion systems were checked by the Veritas Bureau classification society and a maintenance company, during which no defects were detected. Shortly thereafter, vessel BESIKTAS PERA was replaced by another vessel to provide the fuel supplying service to the port of Valencia.

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## OBJECTIVE DATA

### Vessel data

The BESIKTAS PERA is a product tanker operating under the Maltese flag, which was built in 2009 and is used for transporting petroleum and chemical products. Since the 22<sup>nd</sup> of August 2001, she has been tasked with supplying fuel and lubricants to the ports of Valencia and Sagunto.

Regarding the main characteristics of the vessel, the following are noted: She has a total length of 98.71 m, a breadth of 14.1 m, a depth of 7.2 m, a maximum draught of 5.8 m, a gross tonnage (GT) of 2,974, a displacement of 5,979 t and deadweight of 4,121 t.

The propulsion system is configured for a 1,710 kW engine that drives a right-handed controllable pitch propeller and another 350 kW engine that drives a transverse propeller located on the bow. Additionally, it has three auxiliary generators providing 365 kW each.

The vessel is classified by the Bureau Veritas, which is a society that is part of the IACS (International Association of Classification Societies), and which has been recognized by the European Union.

At the time of the accident all of the vessel's certificates were current.



Figure 2. Vessel BESIKTAS PERA

The vessel is owned by KAS TANKER CO LTD; while the commercial operation as well as the obligations and responsibilities listed in the International Safety Management Code (ISM Code) is carried out by company BESIKTAS LIKID TASIMACILIK.



### The Crew

The vessel's crew was comprised of fifteen members of different nationalities: the Master and his relief were Spanish, the Deck and Engineering Officers were Turkish, and the junior Officers were Turkish and Romanian. The working language used on board the vessel was English.

All of the vessel's crewmembers were in possession of the special professional titles and certificates required for the performance of their duties.

### Weather information

The weather and sea conditions at the time and location of the accident were mild winds from the SE of force 3 on the Beaufort scale (7 to 10 knots), good visibility and rippled sea.

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## ANALYSIS AND CONCLUSIONS

In the analysis of the circumstances of the accident, the reports drafted by the Maritime Authority of Valencia, by company BESIKTAS LIKID TASIMACILIK and by the Pilot that was on board were taken into consideration.

The statements made by the vessel's master as well as by the Pilot are in agreement regarding an engine control system failure that occurred during the manoeuvre, since they both reported that the vessel's headway exceeded the command that had been given to the engine control system, and that this headway remained invariable when the command was changed to full reverse.

On the other hand, the Chief engineer stated that full forward had been commanded from the wheelhouse followed by the full reverse command. The first command caused the propulsion engine to overload and the turbo-compressor to vibrate. By giving the full reverse command, the engine RPMs decreased rapidly, the oil pressure dropped, and the reserve pump started up until the pressure returned to the normal operating level. When the vessel impacted against the pier, the engine RPMs dropped even further, which, among other things, activated the propeller pitch control failure alarm.

Considering the existence of contradictions in witness statements regarding the commands transmitted to the engine room from the wheelhouse and the indications displayed on the engine room repeater, and lacking further elements for analysis, this commission has not been able to conclude if the accident occurred as a consequence of an error on the part of the vessel's Master during the docking manoeuvre or a technical failure in the engine command transmission system.

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## SAFETY RECOMMENDATIONS

This Commission, in view of the conclusions reached, does not provide any safety recommendations, which may contribute to preventing this type of accident from occurring in the future.

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