

BUNKER QUANTITY SURVEY SERVICES

As bunker fuel is often the largest contributor to the operational costs of a ship, it is critical that the fuel purchaser ensures the correct amount of fuel is received, or has sufficient information to substantiate their claim in the event of any dispute.

As bunkering operations often take place some distance from the fuel purchaser's office, it is in their interest to engage a surveyor to verify the quantity delivered and oversee fuel sampling for laboratory analysis. Responding to these concerns, Intertek ShipCare offers impartial and independent bunker quantity surveys (BQS) through our network of laboratories and offices, covering around 250 ports in over 100 countries. Bunker fuel measurement, sampling and testing are conducted to accepted industry standards and accreditations, including ISO 13739, SS600, TR48, ISO 17020 and ISO 17025. In addition, clients' own procedures can also be followed when stipulated.

The Intertek ShipCare surveyor will also oversee and supervise bunker fuel sampling before arranging fuel quality testing at a convenient laboratory.

Reports issued for bunker quantity surveys include: -

- i) A quantity delivered calculation based on density and water testing
- ii) Detailed bunker survey and analytical fuel reports
- iii) Photographs as requested and when permitted

Mass flow meters

Many fuel purchasers have asked whether there will still be a requirement for bunker surveys for deliveries using mass flow meters. The Singapore MPA refer to the presence of a surveyor in their document, "Mass Flow Metering Delivery Procedure for Bunkering Date: July 2014" and in their FAQ document, state, "The role of a bunker surveyor being an independent party to witness and ensure compliance to bunker delivery processes remains unchanged." The role of a bunker quantity surveyor is to be an independent party engaged to witness a BQS operation and ensure compliance to bunker delivery procedures. However, the function of a bunker surveyor might well change for MFM deliveries.

For example, in order to ensure the integrity of the entire MFM before and after the delivery the surveyor will be required to cross check the seal verification report and the actual physical seals at various locations in the mass flow meter system.

The detailed actions required from bunker surveyors are covered under the MPA - Generic MFM delivery procedure.

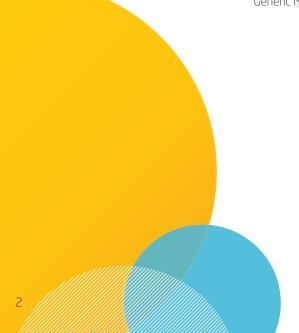
LNG

Increased environmental regulation has fostered an interest in LNG as a marine bunker fuel.

Intertek LNG services currently support all phases of the industry Including cargo inspection, vendor inspection, laboratory quality analysis, metering and calibration. As the use of LNG as a marine bunker fuel develops, Intertek ShipCare will be there to offer assistance To the ship owner.

Other services available from Intertek ShipCare include: -

- i) Remaining on-board (ROB) surveys
- ii) On-hire / off-hire surveys
- iii) Bespoke training on both quantity and quality aspects of bunker fuel for technical, operational and other staff members.



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BUNKER QUANTITY SURVEY CASE STUDY

CAPPUCCINO CASE

Intertek ShipCare was nominated to oversee a bunker delivery in the port of Singapore. The delivery was of 300 MT of grade RMK 500.

The delivery barge stopped pumping short of the nominated quantity. The receiving vessel appeared to receive more than the barge received figure, but the surveyor recorded that a large amount of bubbles were present – often termed a cappuccino effect. The surveyor then waited 1.5 hours and found the level in the fuel tank had dropped by the equivalent of 25MT. The vessel did not request additional pumping due to the risk of further aeration.

Furthermore, the vessel was due to leave



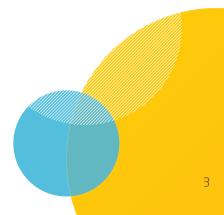
Intertek ShipCare's client demanded a commercial settlement of another 15MT. The supplier agreed.

NB. The bunkers could continue to decrease below the settlement/BDR figure. Intertek ShipCare always advises that vessels should not leave port until all air has dissipated, but respect operational matters often mean this is unavoidable. Our client and the surveyor suggested the supplier should sign the BDR at 35MT lower.

Our client and the surveyor suggested the supplier should sign the BDR at 35MT lower than the received figure.

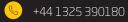
The supplier accepted the BDR with a 'Letter of Protest' issued.

The Intertek ShipCare Bunker Quantity Survey saved the client 35MT of fuel – with an equivalent value of around USD 20k.





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