

Bunker Surveying Services

Receive the amount of bunker purchased

A Bunker Survey is carried out to measure and ascertain the quantity of Bunker on board at the specific time. This survey reports the amount of bunker, usually Fuel Oil (FO) and Diesel Oil (DO), and sometimes Lubricating Oil (LO) on board. In surveying the stemmed bunkers we can assure the bunker purchaser the amount of bunkers purchased is also delivered and noted correctly on the BDN.

Our Bunker Surveying services include:

- Measurement of the bunker tanker and receiving vessel, before and after delivery.
- Bunker fuel sampling and testing to accepted industry standards.
- Quantity delivered calculation, based on density testing.
- Detailed bunker survey reports.
- Sampling documentation photographs as requested or permitted.

How are the surveys conducted?

Bunker Quantity Surveys (BQS) are carried out by our experienced marine surveyors on behalf of ship operators to find concealed (hidden) bunker fuel onboard. To find concealed fuel someone qualified has to go on board the vessel and get their hands dirty essentially looking for magic pipes, unauthorized connections; tampered gauging equipment, doctored fuel gauges etc. In order to prevent fuel losses our experienced surveyors offer impartial, independent quantity measurement inspection services for marine fuels, issuing detailed bunker survey reports to ascertain the exact fuel quantity onboard at the time of survey and to report any bunker fuel shortages. The following scenarios will indicate why a stem audit is an essential loss control tool – especially for operators with a large fleet.

An indispensible loss control tool

The mal-practices during bunkering operations which we see and hear about though quite prevalent with bunker suppliers; but on many occasions we have come across situations where the receiving vessel will be much as involved as the supplier in these dubious practices. Often we have found that the vessel would under-declare fuel quantity which is then either sold back to the barge supplier or simply kept hidden on the vessel until an opportunity comes along to profit from this. For example: an order for 1000 metric tons of FO is placed at the next bunkering port - the vessel has an excess of 50 metric tons (undeclared). Now when the supply barge comes alongside (through prior negotiations) the vessel would deliberately short-receive (or barge will deliberately short-supply) 50 tons. In other words the actual supplied quantity would be 950 tons but on the BDN it would be reported as 1000 tons and the operator will be invoiced based on this BDN quantity. The short-received (or shortdelivered bunker) profit will be shared between the supplier and the vessel. In the end it's the operator who is affected – suffering the loss twice (50 tons + 50 tons).

Contributing factors for the loss:

- Too much reliance on the vessel's staff
- No bunker stem audits are conducted, which involve elaborate detective work carried out by independent third party surveying firms
- Ignoring non-nominating (non-receiving) tanks to be included in the overall tank measurements during stem operations.



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Most shipping companies will engage the services of an independent surveyor to protect their interest in case of a large discrepancy in the final figures between the barge and the vessel; however, how many companies actually give clear instructions to the attending surveyor to measure all nonnominated tanks (non-receiving tanks)? Or how many surveying firms actually carry out the measurements diligently? Failing to do so leaves the operator vulnerable as explained above.



About AEGIS

AEGIS is an independent marine consultancy company providing a broad range of transhipment services such as cargo surveying, superintendency services, loss control and STS services. Based in The UAE we operate world-wide for specialized assignments delivering the highest standards of integrity and expertise. We show a strong focus on value added services and operational efficiency. As a result our solutions benefit our clients directly with a proven return on investment.

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Scenario 1: Under-declaring / To ship owners advantage

Bunker stemmed by the vessel operator	1500.00	MT
ROB as per log book (arrival bunkering port)	350.00	MT
Un-declared fuel onboard	53.00	MT
Actual bunker stemmed	1500.00	MT
Quantity declared on BDN	1500.00	MT
Final ROB declared in log book after bunkering	1850.00	MT
However, actual ROB would be	1903.00	MT
Fuel cost \$ USD /MT	650.00	USD
Losses for the operator	-34,450.00	USD



The excess 53 MT of fuel oil will be in favour of the owners with a loss to the charterers

Scenario 2: Under-declaring / With the aim to profit for personal gain

Bunker stemmed by the vessel operator	1500.00	MT
ROB as per log book (arrival bunkering port)	350.00	MT
Un-declared fuel onboard	53.00	MT
Actual bunker stemmed (deliberate short supply)	1447.00	MT
Quantity (incorrectly) declared on BDN	1500.00	MT
Final ROB declared in log book after bunkering	1850.00	MT
Actual ROB would also be	1850.00	MT
So where did 53 MT disappear?	You guessed	it!
Fuel cost \$ USD /MT	650.00	USD
Losses for the operator will be double		
• for under-declared fuel	-34,450.00	USD
 for the short-supply fuel 	-34,450.00	USD
	-68.900.00	USD





Different bunker fuels:

- MFO (Marine fuel oil) All types of bunker fuels.
- MGO (Marine gas oil) Roughly equivalent to No. 2 fuel oil, made from distillate only.
- MDO (Marine diesel oil) Low viscosity blend of heavy gasoil that may contain very small amounts of black oil feed stocks, does not need to be heated for use in internal combustion engines.
- IFO (Intermediate fuel oil) A blend of gasoil and heavy fuel oil, with less gasoil than marine diesel oil.
- HFO (Heavy fuel oil) Pure or nearly pure residual oil, roughly equivalent to No. 6 fuel.



(Photo Source: www.shipandbunker.com)

Conclusion:

The International Standards Organization, (ISO), introduced a series of specifications to formalize the minimum quality required for the bunker fuels available on the market. The standard ensures the quality of bunkers taken on by the vessel will meet the fueling needs required by the engine and machinery manufacturers.

Bunker pricing and fuel quality are critical components to a vessel's operating costs. Fuel cost can be as much as 60% of a vessels operating budget. Off specification fuel can potentially damage vessel engines and boilers. A bunker survey is relatively cheap insurance to deter product diversion. A detailed bunker survey will confirm fuel delivery and report bunker fuel shortages. If there is an unaccountable gain in bunker tanks or bunker volumes cannot be reconciled with bunker consumption, Letter of Protests are issued and an investigation can identify the causes.

For more information regarding bunker surveys, please feel free to contact our Department of Bunkering – survey@aegisinternationalmarine.com or call (971) 501515370.