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# SHIP CARGO TANK CALIBRATION

BY

**TGC GLOBAL / TOMOJIT GHOSH CALIBRATION**

AN ISO 9001 & LEGAL METROLOGY CERTIFIED COMPANY

[www.tankcalibration.in/shiptanks.htm](http://www.tankcalibration.in/shiptanks.htm)



Ocean going Ship tankers carrying oil, chemicals and natural gas are the principal carriers of world economy – everything is dependent on its cargo

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- As credibility and financial health is a concern for all ship owners and charterers, ship tankers need to have very accurate cargo tank calibration (ullage) tables to be able to transact correct volumes of liquid cargo.
- Its not easy to make accurate calibration tables though, as it may seem simple from a ship GA drawing.



**From ULCCs to smaller ships, why calibration of these cargo tanks is not an easy one** can be understood from the shape these tanks can take as shown below. These are not regular cylindrical or rectangular constructions. As we see these tanks can have very complicated non-linear shapes, bulkheads, web frame partitions & stiffeners, curved & inclined floors, camber and deadwoods (coils, valves, pipes, ladders, etc.) at varying heights. They need to be measured with a great degree of accuracy, geometric conception. Volume calculations are done with help of complex formulations and CAD, which is an extremely difficult task to accomplish in general. Volume in these tanks do not increase in a linear manner or equal volume intervals throughout the ullage height. This accuracy factor involving non-linear volume interval in ship tanks can make or break your cargo transaction receipts and delivery.



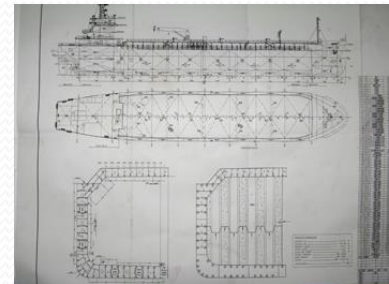
Interior of cargo tanks





## What does it take to do it accurately ? Do we have the technical acumen to deliver ?

- It's a digital age. We utilize the most **modern digital laser instruments and stations** to know the critical dimensions & coordinates of the cargo tanks. Its fast with no holdups, efficient without physical water filling, its accurate and reliable with all the engineering expertise, innovation & geometric conception.
- Volume analysis & calculations are carried out with mathematical & engineering precision for every dimensional detail and deadwood corrections at all levels. Not only machines, but incisive and experienced minds are behind making of ullage tables, list and trim corrections as per international rule API MPMS 2.8.A (on-site linear measurements).
- Our team is always ready to meet any challenging task at any international anchorage.

A screenshot of a spreadsheet showing data for tank measurements. The spreadsheet has multiple columns and rows of data, including numerical values and text labels.

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## Cargo piping volumes

- Volume calculations for pipelines inside the cargo tanks are included in calibration tables
- Separate volume calculations are provided for deck cargo lines, pump room lines, and bottom cargo lines where applicable.



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# Recent Projects

Description	Site	Owner
Calibration of 4 nos. new 7800 DWT Oil and Chemical Ship Tankers	Nanjing and Kejin Shipyard in P.R. of China	W-O Shipping GMBH & Co. KG, Germany
Calibration of 3 nos 50000 DWT bulk cargo carriers	Hindustan Shipyard Ltd, India	Archean Group(Goodearth Marine)
Calibration of ship oil tanker	Mundra Port & SEZ, Mundra, Gujarat, India	Adani Enterprises Ltd
Calibration of new buildings- tankers	Modest at Bhavnagar shipyard, Gujarat	M/s Turquoise, Leichtenstein, British and other owners
Calibration of 300,000 DWT Single hull transverse partitioned tanks	Johor Baru, Malaysia	
Calibration of 8500 DWT tankers	China	W-O shipping, Germany
Calibration of 500 DWT INDIAN NAVY Fuel Barge	Shalimar works, Howrah and Modest Infrastructure, Gujarat	INDIAN NAVY
Calibration of 300000 DWT FSO VLCC crude tanker	Off Douala coast at Cameroon / Nigeria border	Perenco, France



# We make a difference

providing high accuracy at a reasonable cost

- In charge of affairs

**Prosenjit Ghosh**, (pictured right) AMIE, with an experience of 22 years in calibration of tanks, he oversees worldwide business and is the technical head and chairman.



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