



# **TANK CALIBRATION SERVICES**

**SGS**

# TANK CALIBRATION IN THE U.S.

Reliable quantity measurement is the critical basis of good contractual relationships in worldwide trading of chemicals, petroleum products and liquefied gases. This can only be assured by accurate and regular calibration.

## DO YOU KNOW...

- How many years it has been since your tank was last calibrated? The average tank in the U.S. has not been calibrated since the 1950's
- How important loss control is to your company's bottom line?
- That 1/8" is equal to 122 BBIs/5,124 gals for a tank occupying 500,000 BBIs? According to API an acceptable measurement is to the nearest 1/8"
- That a 100,000 BBIs tank = 25 Million pounds?
- That the tank bottom will flex or the tank walls will bulge as product is moved in and out of the tank?

If any of the above questions concern you, it is time to have your tank calibrated.

## WHY SGS...

Reliable quantity measurement is the critical basis of good contractual relationships in worldwide trading of chemicals, petroleum products and liquefied gasses. This can only be assured by accurate and regular calibration. When you use one of our highly trained and professional calibration technicians, you are tapping into the SGS global network of the world's leading inspection, verification, testing and certification company.

SGS is at the forefront of each new development in calibration technology, applying techniques such as Laser Distance Technology and Physical Calibration. Laser Distance Technology enables the calibration of ships tanks without scaffolding, thereby avoiding additional cost and disruption.

## WHY ACCURATE CALIBRATION?

The necessity of professional and accurate tank calibration becomes particularly evident where tanks are used for product

control or custody transfer measurements. The best measurement system is useless if it is based on calibration tables that are out of date. It is expected that the tools used to measure a tank, the tape/bob and thermometer, are to be calibrated on a regular basis, however, if the tank is out of calibration the measurements become compromised.

Any inaccuracies in these tables consistently work in one sense as a systematical error, and a considerable loss can accumulate over a period of time. The purpose of re-calibrating tanks is to ensure that your measurements are in control and you discover changes that may have occurred in the tank volumes.

## RECOMMENDED CALIBRATION

### INTERVALS (API MPMS CH. 2.2A)

- Custody Transfer: Maximum 15 years
- Non-Custody Transfer: 15 to 20 years
- At time of major repairs or alterations (drum sheets and datum)
- At time of verifications exceeding preset values

## RECOMMENDED VERIFICATIONS

### (API MPMS CH. 2.2A)

- Bottom course diameter
- Bottom course plate thickness
- Tank tilt, verticality and shell height

## TANK CALIBRATION SERVICE FEATURES

- Reference circumference with NIST Master tape
- Multitude of level floor shots at 8 to 36 horizontal stations (Ref. API 653)
- Level shots from underside of floating roof for displacement/positioning
- Extensive surveys of internal and external deadwood
- Various reference measurements (e.g., reference gauge height)
- Tank capacity table includes head stress calculations at each liquid level
- Tank capacity table based upon appropriate steel reference

temperature

## TANK DOCUMENTATION SERVICE FEATURES

- Documentation routinely within ten (10) working days (upon receipt of all data)
- Documentation urgently within two (2) working days (upon receipt of all data)
- Standard format 1-inch or 1/10 foot increments (gallons/barrels)
- Side table for average values in 1/16th inch or 1/100th foot increments
- Electronic XLS file with incremental data for computer entry
- Electronic PDF file for viewing the tank capacity table
- Other or additional formats available (multi-pages at additional cost)

## SGS OGC PROVIDES TANK AND BARGE CALIBRATION FROM COAST TO COAST METHODS USED ARE

- API 2.2A Manual Strapping Method
- API 2.2B Optical Reference Line Method
- API 2.2C Optical-Triangulation Method
- API 2.2D Internal Electro-Optical Distance Ranging
- API 2.2G Total Station Reference Line Method
- API 2.7 Calibration of Barge Tanks

SGS is the world's leading inspection, verification, testing and certification company. Recognized as the global benchmark for quality and integrity, we employ over 80 000 people and operate a network of more than 1 650 offices and laboratories around the world.

## SGS NORTH AMERICA, INC. OIL, GAS AND CHEMICALS SERVICES

t +1 757 874 9430

usogc.calibration@sgs.com

WWW.SGS.COM