

# Petroleum and Petrochemical Bulletin

## USE OF VESSELS' MEASUREMENT AND SAMPLING EQUIPMENT

**Bulletin 15-01  
Rev. 1**

This bulletin applies generally and globally but is mandatory for those inspecting imported cargos in the USA that come under the jurisdiction of U.S. Customs and Border Protection (USCBP) or are in a Foreign Trade Zone (FTZ).

Inspection company owned equipment such as tapes, samplers, PMUs (portable measurement units), restricted and closed system measurement and sampling equipment and PETs (portable electronic thermometers) should be used for all inspection work and is a specific requirement of the USCBP.

USCBP requirements for 'Commercial Gaugers' (US Customs approved and bonded Inspection Companies) are set forth in the Code of Federal Regulations at 19 CFR 151 and require that all instruments used by Commercial Gaugers approved by US Customs are owned and calibrated by the Commercial Gauger. It is also implicit in these regulations that Commercial Gauger personnel physically perform the measurements. The obligations of a Customs-approved gauger as specified in 19CFR 151.13 are reproduced below.

*"To maintain the ability, i.e., the instrumentation, equipment, qualified staff, facilities, etc., to perform the services for which the gauger is approved, and allow the Executive Director to evaluate that ability on a periodic basis by such means as on-site inspections, demonstrations of gauging procedures, and reviews of submitted records."*

This requirement is supported globally by TIC Council member companies and in all cases inspectors should take the appropriate inspection company equipment to the vessel and use it for the inspection. This is to be done regardless of whether the vessel's equipment was used at prior ports.

If the inspection company equipment is not configured to match the measurement units (customary or metric) of the vessel's calibration tables, inspection company equipment should still be used and the readings converted to the appropriate units of measurement.

If use of vessel equipment cannot be avoided (e.g., because of special fittings), vessel equipment may be used, but it shall be verified against inspection company calibrated equipment and this verification shall be documented on a checklist, example below.

### Revisions/Reaffirmations

Rev. 0 November 2015  
Rev. 1 December 2020

A Letter of Protest should be issued when vessel's equipment has to be used for gauging and temperature measurement.

The independent inspector shall operate the measuring and/or sampling equipment, irrespective of whether it is owned by the inspection company or the vessel.

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## CHECKLIST

### Verification of Vessel's Measurement Equipment

Note: Vessel's measurement equipment should only be used where there is no alternative and is generally prohibited.

Vessel Name: \_\_\_\_\_

Job #: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Reason why vessel's equipment was used:

\_\_\_\_\_

No.	ITEM	YES	NO
1)	Was a copy of the most recent calibration certificate obtained from vessel?		
2)	Based on calibration records obtained, was equipment calibrated in accordance with relevant standards? (API MPMS Ch. 3.1A, 7,17.11, ISO 4268, EI HM4)		
3)	Has the connection of the tape to the electronic sensor been modified?		
4)	Are the tape graduations correctly referenced to the sensor tip (allowing for manufacturers offset)? (e.g. check at 1m/3 ft.)		
5)	Is the height of the adapter correct (ie., is the zero ullage point on the PMU the same as the zero ullage point specified by the vessel's ullage tables) Not all adapters are the same height.		
6)	Is the reference point of the PMU correctly positioned? (Compare with the reading of the inspector's tape. Note any difference)  Difference:		
7)	Is the tape in good condition (not cracked or broken)?		
8)	Does the reference tank gauge height from the calibration tables match the tape reading when checked? (no hidden splices/tampering)		
9)	Does the temperature reading agree with a calibrated mercury in glass thermometer or a verified and calibrated PMU/PET? Note any difference.  Difference:		
10)	Does the water interface audible alarm function?		
11)	Was any water paste used provided by the inspector?		
12)	Based on the above is the vessel's equipment fit for use?		

PMU - Portable Measuring Unit. Serial Numbers Tape: \_\_\_\_\_ Sensor: \_\_\_\_\_

PET Serial Number: \_\_\_\_\_

Steel Tape/Bob Serial Number: \_\_\_\_\_

A copy of this form must be retained on file.