

Manual of Petroleum Measurement Standards Chapter 2—Tank Calibration

Section 8B—Recommended Practice for the Establishment of the Location of the Reference Gauge Point and the Gauge Height of Tanks on Marine Tank Vessels

FIRST EDITION, AUGUST 1995

REAFFIRMED, NOVEMBER 2019



Manual of Petroleum Measurement Standards Chapter 2—Tank Calibration

**Section 8B—Recommended Practice for the
Establishment of the Location of
the Reference Gauge Point and the
Gauge Height of Tanks on Marine
Tank Vessels**

Measurement Coordination

FIRST EDITION, AUGUST 1995

REAFFIRMED, NOVEMBER 2019



SPECIAL NOTES

1. API PUBLICATIONS NECESSARILY ADDRESS PROBLEMS OF A GENERAL NATURE. WITH RESPECT TO PARTICULAR CIRCUMSTANCES, LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS SHOULD BE REVIEWED.
2. API IS NOT UNDERTAKING TO MEET THE DUTIES OF EMPLOYEES, MANUFACTURERS, OR SUPPLIERS TO WARN AND PROPERLY TRAIN AND EQUIP THEIR EMPLOYEES AND OTHERS EXPOSED CONCERNING HEALTH AND SAFETY RISKS AND PRECAUTIONS, NOR UNDERTAKING THEIR OBLIGATIONS UNDER LOCAL, STATE, OR FEDERAL LAWS.
3. INFORMATION CONCERNING SAFETY AND HEALTH RISKS AND PROPER PRECAUTIONS WITH RESPECT TO PARTICULAR MATERIALS AND CONDITIONS SHOULD BE OBTAINED FROM THE EMPLOYER, THE MANUFACTURER OR SUPPLIER OF THAT MATERIAL, OR THE MATERIAL SAFETY DATA SHEET.
4. NOTHING CONTAINED IN ANY API PUBLICATION IS TO BE CONSTRUED AS GRANTING ANY RIGHT, BY IMPLICATION OR OTHERWISE, FOR THE MANUFACTURE, SALE, OR USE OF ANY METHOD, APPARATUS, OR PRODUCT COVERED BY LETTERS PATENT, NEITHER SHOULD ANYTHING CONTAINED IN THE PUBLICATION BE CONSTRUED AS INSURING ANYONE AGAINST LIABILITY FOR INFRINGEMENT OF LETTERS PATENT.
5. GENERALLY, API STANDARDS ARE REVIEWED AND REVISED, REAFFIRMED, OR WITHDRAWN AT LEAST EVERY FIVE YEARS. SOMETIMES A ONE-TIME EXTENSION OF UP TO TWO YEARS WILL BE ADDED TO THIS REVIEW CYCLE. THIS PUBLICATION WILL NO LONGER BE IN EFFECT FIVE YEARS AFTER ITS PUBLICATION DATE AS AN OPERATIVE API STANDARD OR, WHERE AN EXTENSION HAS BEEN GRANTED, UPON REPUBLICATION. STATUS OF THE PUBLICATION CAN BE ASCERTAINED FROM THE API AUTHORIZING DEPARTMENT (TELEPHONE (202) 682-8000). A CATALOG OF API PUBLICATIONS AND MATERIALS IS PUBLISHED ANNUALLY AND UPDATED QUARTERLY BY API, 1220 L STREET, N.W., WASHINGTON, D.C. 20005.

FOREWORD

The *API Manual of Petroleum Measurement Standards* (MPMS) is currently available. The manual will eventually include all subject matter now found in API measurement publications—including evaporation loss measurement—as well as new material and revised editions of existing MPMS material when revisions are completed.

API publications may be used by anyone desiring to do so. Every effort has been made by the Institute to assure the accuracy and reliability of the data contained in them; however, the Institute makes no representation, warranty, or guarantee in connection with this publication and hereby expressly disclaims any liability or responsibility for loss or damage resulting from its use or for the violation of any federal, state, or municipal regulation with which this publication may conflict.

Suggested revisions are invited and should be submitted to Measurement Coordination, Exploration and Production Department, American Petroleum Institute, 1220 L Street, N.W., Washington, D.C. 20005.

CONTENTS

	Page
SECTION 8B—RECOMMENDED PRACTICE FOR THE ESTABLISHMENT OF THE LOCATION OF THE REFERENCE GAUGE POINT AND THE GAUGE HEIGHT OF TANKS ON MARINE TANK VESSELS	
2.8B.0 Introduction	1
2.8B.1 Scope and Field of Application.....	1
2.8B.2 References	1
2.8B.3 Safety	1
2.8B.4 Tank Measuring Equipment	1
2.8B.5 Measurement Conditions and Tolerances	1
2.8B.5.1 Measurement Conditions.....	1
2.8B.5.2 Measurement Tolerances	2
2.8B.6 Number and Location of Reference Gauge Points.....	2
2.8B.6.1 Number of Reference Gauge Points	2
2.8B.6.2 Location of Reference Gauge Points (Tank Ships)	2
2.8B.6.3 Location of Reference Gauge Points—Combination Carriers (OBOs)	3
2.8B.6.4 Location of Reference Gauge Points (Barges)	3
2.8B.7 Gauging Hatches	4
2.8B.7.1 Primary Gauging Hatch.....	4
2.8B.7.2 Other Manual Gauge Points	5
2.8B.8 Measurement Procedures	5
2.8B.8.1 Preliminary	5
2.8B.8.2 Measurement of Gauge Point Locations	6
2.8B.8.3 Measurement of Reference Gauge Height	7
2.8B.8.4 Expansion Trunk Cover Gasket Compression.....	7
2.8B.9 Calculation Procedures	8
Figures	
1—Longitudinal Section Through Typical Cargo Tank Showing Recommended Gauge Point Locations for Tankers	3
2—Transverse Section Through Typical Cargo Tank Showing Gauge Point Locations	4
3—Transverse Section Through Typical Cargo Tank Showing Recommended Gauge Point Locations for Tankers	5
4—Longitudinal Section Through Cargo Hold/Tank of a Combination Carrier (OBO) Showing Recommended Gauge Point Locations	6
5—Transverse Section Through Cargo Hold/Tank of a Combination Carrier (OBO) Showing Recommended Gauge Point Locations	7
6—Longitudinal Section Through Cargo Tank of a Typical Inland Waterway Tank Barge Showing Recommended Gauge Point Locations	8
7—Transverse Section Through Cargo Tank of a Typical Inland Waterway Tank Barge Showing Recommended Gauge Point Locations	9
8—Illustration of Length Between Draft Marks 70,000 DWT Tanker	10
9—Sketch for Locating Gauge Point.....	10
10—Check Measurement for Gasket Compression.....	11