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An American National Standard

BSI Handbook



Designation: MPMS Chapter 11.1 (Standard 2540)



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Standard Guide for Petroleum Measurement Tables¹

This standard is issued under the fixed designation D 1250; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

This guide has been approved by the sponsoring committees and accepted by the cooperating organizations in accordance with established procedures.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 These Petroleum Measurement Tables² are for use in the calculation of quantities of crude petroleum and petroleum products at reference conditions in any of three widely used systems of measurement. These tables are provided for standardized calculation of measured quantities of petroleum fluids regardless of point of origin, destination, or units of measure used by custom or statute.

1.2 The Petroleum Measurement Tables published in 1980, except for Tables 33 and Tables 34 (which are being reissued without change), represent a major conceptual departure from previous versions. Inherent in the Petroleum Measurement Tables is the recognition of the present and future position of computers in the petroleum industry. The actual standard represented by the Petroleum Measurement Tables is neither the hardcopy printed tables nor the set of equations used to represent the density data but is an explicit implementation procedure used to develop computer subroutines for Tables 5, Tables 6, Tables 23, Tables 24, Tables 53, and Tables 54. The standardization of an implementation procedure implies the standardization of the set of mathematical expressions, including calculational sequence and rounding procedures, used within the computer code. Absolute adherence to the outlined

procedures will ensure that all computers and computer codes of the future, meeting the stated specifications and restrictions, will be able to produce identical results. Hence, the published implementation procedures are the primary standard, the distributed subroutines are the secondary standard, and the published tables are produced for convenience.

NOTE 1—The present collection of tables supersedes all previous editions of the Petroleum Measurement Tables ANSI/ASTM D 1250, IP 200, and API Standard 2540.

2. Referenced Documents

2.1 ASTM Standards:

D 287 Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)³

3. Sponsorship

3.1 The complete collection of the new jointly issued ASTM-API-IP tables is the result of close cooperation between the American Society for Testing and Materials, American Petroleum Institute, and the Institute of Petroleum (London). To meet the objective of worldwide standardized measurement practices, the American National Standards Institute and the British Standards Institution have also been closely involved, resulting in the acceptance of the revised tables as an American National Standard and a British Standard. In addition, in their respective capacities as Secretariat of the International Organization for Standardization/TC 28 and of TC 28/SC 3, ANSI and BSI have been instrumental in progressing the revised tables toward their adoption as an International Standard by the International Organization for Standardization. The ASTM Designation D 1250 applies to all 35 tables described in

¹ This guide is under the jurisdiction of ASTM Committee D02 on Petroleum Products and Lubricants and is the direct responsibility of Subcommittee D02.02 on Static Petroleum Measurement.

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² When ordering from ASTM International, request ADJD125001 for Vol I; ADJD125002 for Vol II; ADJD125003 for Vol III; ADJD125004 for Vol IV; ADJD125005 for Vol V; ADJD125006 for Vol VI; ADJD125007 for Vol VII; ADJD125008 for Vol VIII; ADJD125009 for Vol IX; ADJD125010 for Vol X; and for Vol XI/XII—ADJD125011. The adjunct number for the complete set is ADJD1250CS.

³ Annual Book of ASTM Standards, Vol 05.01.