

GP 15-04-01	Flow Instruments	April 2005
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Flow Instruments

GP 15-04-01

Scope

- 1) [I] This Global Practice (GP) covers the design and selection of flow meters and associated equipment.
 - 2) [I] Restriction and mixing orifices are not covered by this Practice.
 - 3) [I] An asterisk (*) indicates that a decision by the Owner's Engineer is required, that additional information is to be furnished by the Owner's Engineer, or that information for Owner's Engineer approval is to be supplied by Vendor or Contractor.
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1. Required References

- 1) * [I] This Section lists Practices and Standards that are generically referenced and assumed to be a part of this document. Unless otherwise specified herein, use the latest edition.
- 2) * [I] Any system of measurement to be used for custody transfer shall meet one of the two conditions shown below:
 - a) The practice is an ISO, API, or ASTM standard.
 - b) The practice is endorsed by the ExxonMobil Product Control Manual or regional Hydrocarbon Measurement Practices and approved by the Owner's Engineer.

1.1. Global Practices–ExxonMobil Engineering Practices

GP 03-06-01	Piping for Instruments
GP 03-10-01	Piping Selection and Design Criteria
GP 03-16-01	Flanged Joints, Gaskets, and Bolting
GP 03-18-01	Piping Fabrication Shop or Field
GP 15-06-01	Electronic and Pneumatic Instruments
GP 15-07-02	Protective Systems
GP 17-05-01	Human Factors in Plant Design

1.2. API–American Petroleum Institute

API MPMS 4.1	Manual of Petroleum Measurement Standards Chapter 4 - Proving Systems Section 1 - Introduction
API MPMS 4.2	Manual of Petroleum Measurement Standards Chapter 4 - Proving Systems Section 2 - Displacement Provers
API MPMS 4.4	Manual of Petroleum Measurement Standards Chapter 4 - Proving Systems Section 4 - Tank Provers
API MPMS 4.5	Manual of Petroleum Measurement Standards Chapter 4 - Proving Systems Section 5 - Master-Meter Provers
API MPMS 4.6	Manual of Petroleum Measurement Standards Chapter 4 - Proving Systems Section 6 - Pulse Interpolation
API MPMS 4.7	Manual of Petroleum Measurement Standards Chapter 4 - Proving Systems Section 7 - Field - Standard Test Measures
API MPMS 4.8	Manual of Petroleum Measurement Standards Chapter 4 - Proving Systems Section 8 - Operation of Proving Systems
API MPMS 5.1	Manual of Petroleum Measurement Standards Chapter 5 - Metering Section 1 - General Considerations for Measurement by Meters

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API MPMS 5.2	Manual of Petroleum Measurement Standards Chapter 5 - Liquid Metering Section 2 - Measurement of Liquid Hydrocarbons by Displacement Meters
API MPMS 5.3	Manual of Petroleum Measurement Standards Chapter 5 - Metering Section 3 - Measurement of Liquid Hydrocarbons by Turbine Meters
API MPMS 5.4	Manual of Petroleum Measurement Standards Chapter 5 - Metering Section 4 - Accessory Equipment for Liquid Meters
API MPMS 5.5	Manual of Petroleum Measurement Standards Chapter 5 - Metering Section 5 - Fidelity and Security of Flow Measurement Pulsed-Data Transmission Systems
API MPMS 6.2	Manual of Petroleum Measurement Standards Chapter 6 - Metering Assemblies Section 2 - Loading-Rack Metering Systems
API MPMS 6.4	Manual of Petroleum Measurement Standards Chapter 6 - Metering Section 4 - Metering Systems for Aviation Fueling Facilities
API MPMS 6.5	Manual of Petroleum Measurement Standards Chapter 6 - Metering Assemblies Section 5 - Metering Systems for Loading and Unloading Marine Bulk Carriers
API MPMS 6.6	Manual of Petroleum Measurement Standards Chapter 6 - Metering Assemblies Section 6 - Pipeline Metering Systems
API MPMS 6.7	Manual of Petroleum Measurement Standards Chapter 6 - Metering Assemblies Section 7 - Metering Viscous Hydrocarbons
API MPMS 12.2	Manual of Petroleum Measurement Standards Chapter 12 - Calculation of Petroleum Quantities Section 2 - Calculation of Liquid Petroleum Quantities Measured by Turbine or Displacement Meters
API MPMS 14.3.1	Manual of Petroleum Measurement Standards Chapter 14 - Natural Gas Fluids Measurement Section 3 - Concentric, Square-Edged Orifice Meters Part 1 - General Equations and Uncertainty Guidelines
API MPMS 14.3.2	Manual of Petroleum Measurement Standards Chapter 14 - Natural Gas Fluids Measurement; Section 3 - Concentric, Square-Edged Orifice Meters; Part 2 - Specification and Installation Requirements
API MPMS 14.3.3	Manual of Petroleum Measurement Standards Chapter 14 - Natural Gas Fluids Measurement Section 3 - Concentric, Square-Edged Orifice Meters Part 3 - Natural Gas Applications
API MPMS 14.3.4	Manual of Petroleum Measurement Standards Chapter 14 - Natural Gas Fluids Measurement Section 3 - Concentric, Square-Edged Orifice Meters Part 4 - Background, Development, Implementation Proc. and Subroutine Doc.
API RP 551	Process Measurement Instrumentation

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