

GP 15-03-01	Pressure Instruments	January 2002
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Pressure Instruments

GP 15-03-01

Scope

[I] This Global Practice (GP) covers the design and selection of pressure instruments.

[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 the Owner's Engineer approval is to be supplied by Vendor or Contractor.

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GP 15-03-01	Pressure Instruments	January 2002
-------------	----------------------	--------------

Table of Contents

1. Required References.....	3
1.1. Global Practices–ExxonMobil Engineering Practices	3
1.2. API–American Petroleum Institute	3
1.3. ASME–American Society of Mechanical Engineers	3
2. Design.....	3
3. Indicating Pressure Gauges	4
4. Pneumatic Air Receiver Indicating Gauges	4
5. Pressure Switches.....	5
Record of Change.....	6
Attachment: Purpose Codes Definitions.....	7

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Page 2 of 7	©ExxonMobil Development Company	



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GP 15-03-01	Pressure Instruments	January 2002
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1. Required References

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.

1.1. Global Practices–ExxonMobil Engineering Practices

GP 03-06-01	Piping for Instruments
GP 03-16-01	Flanged Joints, Gaskets, and Bolting
GP 15-06-01	Electronic and Pneumatic Instruments

1.2. API–American Petroleum Institute

API RP 551	Process Measurement Instrumentation
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1.3. ASME–American Society of Mechanical Engineers

ASME B1.20.1	Pipe Threads, General Purpose (Inch)
ASME B40.1	(Withdrawn) Gauges - Pressure Indicating Dial Type - Elastic Element Special Notice

2. Design

- 1) [O] Pressure range shall be such that normal pressure will be in the middle third of the span.
- 2) * [S], [R] Instruments shall have over-range protection to the maximum pressure to which they may be exposed. Instruments exposed to vacuum shall have under-range protection to full vacuum.
- 3) [S] Instruments in flammable or toxic service shall not have pressure-containing parts of low melting materials such as aluminum or brass.
- 4) * [R] All wetted and pressure-containing parts shall meet the material requirements of the process piping to which the instrument is connected. External diaphragm seals may be used with Owner's Engineer approval. In process streams containing hydrogen, the use of gold-plated diaphragms shall be considered.
- 5) [O] Scales and displays (local or remote) shall read in engineering units.

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