

GP 15-11-01	Instrument Control Panels	August 2002
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Instrument Control Panels

GP 15-11-01

Scope

- 1) * [I] This Global Practice (GP) covers the design of control panels to mount instrumentation including local unit control/shutdown systems, packaged units, and machinery equipment. This GP does not directly apply to the design and internal wiring of cabinets or racks which are produced by manufacturers of integrated, distributed control systems and/or protective logic systems, unless required by Owner's Engineer.
- 2) [I] This GP does not cover the construction of large-scale local instrument shelters/buildings which are covered by [GP 04-03-01](#) and/or [GP 04-03-02](#), or electrical substation panels which are covered by [GP 16-12-01](#).
- 3) [I] An asterisk (*) indicates that a decision by the Owner's Engineer or Purchaser is required, or that additional information is to be supplied by the Purchaser.

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GP 15-11-01	Instrument Control Panels	August 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. ASTM–American Society for Testing and Materials	3
1.4. NEMA–National Electrical Manufacturers Association	3
1.5. NFPA–National Fire Protection Association	3
2. Additional Requirements	4
2.1. CENELEC–European Commission for Electrotechnical Standardization	4
2.2. CSA–Canadian Standards Association	4
2.3. IEC–International Electrotechnical Commission	4
2.4. ISA–Instrumentation Systems and Automation Society.....	4
3. Instrument Panels.....	4
3.1. Layout and Arrangement	4
3.2. Panel Construction.....	6
4. Terminals and Wiring Details	8
5. Instrument and Wiring Identification	9
6. Air Supply and Distribution	9
Record of Change.....	12
Attachment: Purpose Codes Definitions	13

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GP 15-11-01	Instrument Control Panels	August 2002
-------------	---------------------------	-------------

1. Required References

[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.

1.1. Global Practices–ExxonMobil Engineering Practices

GP 03-02-04	Pressure Relieving Systems
GP 03-06-01	Piping for Instruments
GP 15-03-01	Pressure Instruments
GP 15-06-01	Electronic and Pneumatic Instruments
GP 15-06-02	Environmental Protection for Instrumentation
GP 15-07-01	Electric Power Branch Circuit Design for Instrumentation
GP 15-07-03	Alarm Systems
GP 15-10-01	Instrument Transmission Systems
GP 15-12-01	Instrument Wire and Cable
GP 16-03-01	Wiring Methods and Material Selection
GP 20-01-01	Inspection of Equipment and Materials

1.2. API–American Petroleum Institute

API RP 554	Process Instrumentation and Control
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1.3. ASTM–American Society for Testing and Materials

ASTM A 269	Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service
ASTM B 68	Standard Specification for Seamless Copper Tube, Bright Annealed
ASTM B 75	Standard Specification for Seamless Copper Tube

1.4. NEMA–National Electrical Manufacturers Association

NEMA 250	Enclosures for Electrical Equipment (1000 Volts Maximum)
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1.5. NFPA–National Fire Protection Association

NFPA 70	National Electrical Code
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Page 3 of 12	©ExxonMobil Development Company	



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GP 15-11-01	Instrument Control Panels	August 2002
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NFPA 496	Standard for Purged and Pressurized Enclosures for Electrical Equipment (National Fire Codes, vol. 7)
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2. Additional Requirements

* [I] The following Standards shall be used with this GP as specified by the Purchaser.

2.1. CENELEC–European Commission for Electrotechnical Standardization

CENELEC EN 50016	Electrical Apparatus for Potentially Explosive Atmospheres Pressurized Apparatus 'P'
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2.2. CSA–Canadian Standards Association

CSA C22.1HB-02	CE Code Handbook - An Explanation of Rules of the Canadian Electrical Code, Part 1
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2.3. IEC–International Electrotechnical Commission

IEC 60668	Dimensions of Panel Areas and Cut-Outs for Panel and Rack-Mounted Industrial-Process Measurement and Control Instruments
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2.4. ISA–Instrumentation Systems and Automation Society

ISA RP12.4	Pressurized Enclosures
ISA RP12.6	Wiring Practices for Hazardous (Classified) Locations Instrumentation Part 1: Intrinsic Safety

3. Instrument Panels

3.1. Layout and Arrangement

- * [S] All control panels and terminal racks to be installed in existing control buildings or adjacent to existing panels shall be designed to match the existing equipment. The Purchaser must approve exceptions.

Control panels to be installed in an electrically classified area shall be designed in accordance with the provisions of the NFPA 70, or the appropriate equivalent code for the location.

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