

GP 10-12-01	Vibration, Axial-Position, and Bearing-Temperature Monitoring Systems for Compressors and Drivers	March 2002
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Vibration, Axial-Position, and Bearing-Temperature Monitoring Systems for Compressors and Drivers

GP 10-12-01

Scope

- 1) [I] This Global Practice (GP) covers the design and installation of vibration, axial-position, and bearing temperature monitoring systems for shaft and casing vibration, and bearing temperature measurements of the following types of machinery:
 - a) Special Purpose, and Utility and Instrument Air Centrifugal Compressors
 - b) Axial Compressors
 - c) Rotary Screw Compressors
 - d) Special Purpose Steam Turbines
 - e) Combustion Gas Turbines and Expanders
 - f) High Speed, Special Purpose Gear Units
 - g) AC Motors of Items 1, 2, and 3 above, and Synchronous Generators
- 2) [I] All requirements specified in this GP are additions to those of API STD 670-3, 3rd Edition, November 1993, unless specifically noted as exceptions. Paragraph numbers in this GP which do not appear in API STD 670-3 are new paragraphs.
- 3) [I] An asterisk (*) indicates that a decision by the Purchaser is required or that additional information is furnished by the Purchaser.
- 4) [I] A bullet (•) is shown in API STD 670-3, indicating that a Purchaser decision is required.

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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 Practice–ExxonMobil Engineering Practices

GP 15-07-02	Protective Systems
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1.2. API–American Petroleum Institute

API STD 670-3	Vibration, Axial Position, and Bearing Temperature Monitoring Systems Third Edition; Replaces STD 678
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2. Revisions to API Standard 670

[I] All headings contained herein correspond to paragraph numbering within API STD 670-3 and reflect additions, substitutions, modifications, and deletions. All provisions not modified or deleted remain in force.

Modifications to Section 2: General Design Specifications

2.4. Additions: Scope of Supply and Responsibility

- a) [I] The Vendor that has train responsibility shall be responsible for the purchase of monitoring systems, system design, and installation of sensors and signal conditioners including wiring between sensors and signal conditioners, within the confines of the baseplate, for the entire train.
- b) * [I] Vibration sensors, signal conditioners, and monitors shall be procured from the same Manufacturer unless otherwise specified.

Modifications to Section 3: Conventional Hardware

3.1.1.3.b. Addition: Radial Shaft Vibration and Axial Position Transducers

[M] Reverse mount, integral hex nut probe bodies are preferred.

3.4.2.1. Addition: System Output Relays

* [R] Unless otherwise specified, casing vibration and bearing temperature shutdown features shall not be used.

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