



NATIONAL PETROCHEMICAL COMPANY
STANDARDS

MATERIAL STANDARD
FOR
CENTRIFUGAL COMPRESSORS FOR
GENERAL REFINERY SERVICES
NPCS-MS-RE-07
REVISION : 0

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GENERAL

- 1.1 Centrifugal compressors shall be supplied in accordance with the following:
- API 617, "Centrifugal Compressors for General Refinery Service", Fifth Edition, April 1988.
- 1.2 This standard is supplemented by data sheets for each individual item on which the operating conditions and special requirements are listed. Wherever the data sheets conflict with the provisions of this standard, the data sheets shall govern. In the event that there are any exceptions to specifications, data sheets, codes, standards, etc., these shall be clearly listed in the vendor's bid.
- 1.3 Compliance by the manufacturer with the provisions of this standard does not relieve him of his responsibility of furnishing equipment and accessories of proper design mechanically suited to meet the specified service conditions.
- 1.4 Unproven, prototype or "first-off" equipment is not acceptable; only proven equipment may be used. Proven equipment is defined as equipment that has been in continuous operation elsewhere for a minimum of two years without major breakdowns, on similar duties, and under similar conditions. In this context, "similar" does not mean absolutely identical. However, compressor casings of given sizes and pressure ratings must have been operated together at powers and speeds of the same order of magnitude on the application under consideration. Vendor is to provide an experience list with the bid.

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MODIFICATIONS TO API 617

The following paragraphs specifying the modifications follow the API 617, "Centrifugal Compressors for General Refinery Service", Fifth Edition, April 1988. And each paragraph denotes an addition, substitution or deletion.

(Substitution)

The API Standard clause is deleted and replaced by the new clause.

(Deletion)

The API Standard clause is deleted without any replacement.

(Addition)

A new clause with a new number is added.

(Modification)

Part of the API Standard clause is modified, and/or a new description and/or condition is added to that clause.

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SECTION 1 -GENERAL

1.1

SCOPE

(Substitution)

This standard covers the minimum requirements for centrifugal compressors used in process service. The purchaser's requirements for all paragraphs in API 617 which require a purchaser's decision (bulleted paragraphs) will be indicated on the data sheets or in this standard. If not addressed in the enquiry, the proposal shall clearly state the basis included in the furnished pricing.

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1.2 ALTERNATIVE DESIGN

1.2.1 (Addition)

Where reference is made in this standard to AISI or ASTM materials, alternative equivalent materials are acceptable. Where alternates are offered in place of AISI, ASTM or ASME, they shall be of similar or higher *quality and* design. Chemical composition and properties shall be checked to **ensure suitability** for the intended service. All materials will be subject of review by purchaser. Where pressure vessels as defined by the ASME Code are included, they shall be designed and manufactured in accordance with sections VIII and IX.

1.3 CONFLICTING REQUIREMENTS

1.3.1 (Substitution)

In case of conflict between the various documents, their order of precedence is as follows:

- a) Purchase Order.
- b) Requisition.
- c) Data Sheets.
- d) This Standard.
- e) Project Specification(s).

1.3. (Addition)

All conflicting requirements shall be referred to the purchaser in writing. The purchaser will issue confirming documentation, if needed, for clarification.

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1.4 DEFINITION OF TERMS

1.4.22 (Addition1)

"Unit Responsibility" refers to vendor responsible for coordination the technical aspects of the equipment and all auxiliary systems included in the scope of the order. This includes expediting and assurance that all applicable specifications referenced on the data sheets or requisition are supplied to, and complied with, by sub-vendor. It also includes guarantee of performance of the complete package furnished. Unless specified otherwise in the purchase order, the compressor manufacturer shall have unit responsibility. In the event of problems being experienced with complete operating unit when installed, it is the prime vendor responsibility to identify the source of the problem and **only** if and when he can establish that the source is not within his control will he cease to be responsible for the resolution of that problem.

1.4.23 (Addition)

Agreement shall be obtained *in* writing from the purchaser before work may be sub-contracted. **Vendor** shall inspect, coordinate and resolve any problems related to his sub-vendor.

1.4.24 (Addition)

"Licenses" shall refer to equipment manufactured under license and all such equipment shall carry the licensor's written guarantee.

4 SECTION 2-BASIC DESIGN

2.1 GENERAL

2.1.5 (Substitution)

The arrangement of the equipment, including piping and auxiliaries shall be developed by vendor unless otherwise specified in data sheet. The arrangement shall provide adequate clearance areas and safe access for operation and maintenance.

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