

GP 06-05-01	Plate and Frame Heat Exchanger	December 2003
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Plate and Frame Heat Exchanger

GP 06-05-01

Scope

This Global Practice (GP) refers to API STD 662-1, 1st Edition, December 1995, which is part of this GP. API STD 662-1, as amended by this GP, defines the minimum requirements for plate and frame heat exchangers for general refinery services.

[I] An asterisk (*) indicates that a decision by Purchaser is required or that additional information shall be furnished by Purchaser in the Appendix of this GP. The Appendix supplements API STD 662-1, Appendix B.

[I] Only the Sections revised are listed herein. For user convenience, the nature of the revision is noted at the beginning of each Section as follows:

- 1) Addition: Denotes additions to the corresponding API Section.
- 2) Exception: Denotes a replacement of the corresponding API Section.
- 3) New: Denotes new requirements that do not appear in API STD 662-1.

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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 Practices–ExxonMobil Engineering Practices

GP 03-16-01	Flanged Joints, Gaskets, and Bolting
GP 05-01-01	Pressure Vessels
GP 05-03-01	Pressure Testing of Unfired Pressure Vessels
GP 18-07-01	Welding Procedures
GP 18-10-01	Additional Requirements for Materials
GP 18-12-01	Positive Material Identification
GP 19-01-01	Paint and Protective Coatings
GP 20-01-01	Inspection of Equipment and Materials

1.2. API–American Petroleum Institute

API STD 662-1	Plate Heat Exchangers for General Refinery Services
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1.3. ASME–American Society of Mechanical Engineers

ASME SEC VIII D1	BPVC Section VIII - Rules for Construction of Pressure Vessels - Division 1
ASME SEC VIII D1 MA APP 6	Appendix 6 Methods for Magnetic Particle Examination (MT)
ASME SEC VIII D1 MA APP 8	Appendix 8 Methods for Liquid Penetrant Examination (PT)

2. Additional Requirements

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

2.1. Global Practices–ExxonMobil Engineering Practices

GP 18-04-01	Postweld Heat Treatment of Equipment Handling Alkaline Solutions
GP 20-01-02	Administrative Procedures for Obtaining Inspection

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3. Revisions to API Standard 662

[I] All headings contained herein correspond to paragraph numbering within API STD 662-1 and reflect additions, substitutions, modifications, and deletions. All provisions not modified or deleted remain in force.

Modifications to Section 2: General

2.2. Exception

[I] Vendor shall comply with all local rules and regulations.

2.3. Exception

* [I] Registration requirements shall be specified by Purchaser.

Modifications to Section 6: Proposal Information Required

6.9. New

[S] If a fireproof shroud is specified, Vendor shall submit proof that the proposed shroud design has passed a fire test as follows:

- a) The exchanger used in the test had no less than 100 plates.
- b) Both sides of the exchanger were filled with kerosene, under pressure, with no flow.
- c) The pressure of kerosene was not less than 150 psig (10 barg).
- d) The exchanger was placed in a pan of kerosene large enough to expose the entire exchanger exterior to flames.
- e) The exchanger, with the shroud on it, was engulfed by the pan fire for a minimum of one hour.
- f) The maximum observed leakage was 1 gpm (0.23 m³/hr).

6.10. New

[I] Vendor shall specify on the datasheet the maximum size of solid particles that can pass through the exchanger.

Modifications to Section 7: Drawings and Other Data Requirements

7.1.1. Addition: Drawings

[I] The drawings submitted for review shall include all details, dimensions, and materials, sufficient for stress calculations for each part.

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