

GP 07-04-01	Burners for Fired Heaters	July 2001
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Burners for Fired Heaters

GP 07-04-01

Scope

[I] This Global Practice (GP) covers the design, fabrication, and inspection of burners and related components for fired heaters in general refinery service. Burners covered under this Practice include: premix and raw gas, natural and forced draft, combination gas/oil, conventional, and low NO_x.

[I] An asterisk (*) indicates that a decision by the Purchaser is required, or that additional information is furnished by the Owner.

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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 02-01-01	Plant Noise Design Criteria
GP 03-16-01	Flanged Joints, Gaskets, and Bolting
GP 15-01-01	Instrumentation for Fired Heaters
GP 18-04-01	Postweld Heat Treatment of Equipment Handling Alkaline Solutions
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. ASME–American Society of Mechanical Engineers

ASME B1.20.1	Pipe Threads, General Purpose (Inch)
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1.3. API–American Petroleum Institute

API STD 560	Fired Heaters for General Refinery Services
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2. Additional Requirements

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

2.1. Global Practices-ExxonMobil Engineering Practices

GP 03-18-01	Piping Fabrication Shop or Field
GP 20-01-02	Administrative Procedures for Obtaining Inspection

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3. Definitions

Term	[I] Description
Air Doors	Air inlets that are an integral part of a single burner providing air regulation. Air doors are typically located symmetrically around the air plenum with each having a vertical axis. Air doors can provide a tight shut off.
Air Louvres	Multiple blades mounted with either horizontal or vertical axis; all blades operate in a parallel or opposed blade mode. Air louvres offer good air control and tight shut off.
Air Register	An air inlet that is an integral part of a single burner and provides for regulation of air. Air registers are typically composed of concentric sliding parts that do not offer a tight shut off.
Burner tip	The burner component(s) by which the fuel is injected into the combustion zone(s).
Fuel Injector	Any device used to inject or direct fuel into the burner combustion zone.
Gas Spud or Orifice	Associated with premix burners. The orifice in conjunction with the Venturi uses the kinetic energy (force) of the fuel to inspire (primary) air.
Plenum	An enclosure which normally houses one or multiple burners and provides for the distribution of air. A plenum is often used in the supply of pre- heated air. A plenum is sometimes called a windbox.
Ports	Openings in tips.

4. Documentation

[I] All information listed in Table 1 shall be submitted by Vendor as indicated. All quantities related to firing rates shall be expressed in both LHV and HHV. Units to be consistent with API STD 560 burner data sheet.

