



PROCESS  
INDUSTRY  
PRACTICES

COMPLETE REVISION  
August 2018

**Structural**

**PIP STS05120  
Structural and Miscellaneous  
Steel Fabrication Specification**

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## PURPOSE AND USE OF PROCESS INDUSTRY PRACTICES

In an effort to minimize the cost of process industry facilities, this Practice has been prepared from the technical requirements in the existing standards of major industrial users, contractors, or standards organizations. By harmonizing these technical requirements into a single set of Practices, administrative, application, and engineering costs to both the purchaser and the manufacturer should be reduced. While this Practice is expected to incorporate the majority of requirements of most users, individual applications may involve requirements that will be appended to and take precedence over this Practice. Determinations concerning fitness for purpose and particular matters or application of the Practice to particular project or engineering situations should not be made solely on information contained in these materials. The use of trade names from time to time should not be viewed as an expression of preference but rather recognized as normal usage in the trade. Other brands having the same specifications are equally correct and may be substituted for those named. All Practices or guidelines are intended to be consistent with applicable laws and regulations, including OSHA requirements. To the extent these Practices or guidelines should conflict with OSHA or other applicable laws or regulations, such laws or regulations must be followed. Consult an appropriate professional before applying or acting on any material contained in or suggested by the Practice.

This Practice is subject to revision at any time.

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### **REVISION HISTORY**

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## 1. Scope

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This Practice provides requirements for materials, connections, detailing, fabricating, galvanizing, and delivery of structural and miscellaneous steel. Structural and miscellaneous steel are as defined in *ANSI/AISC 303-16 - Code of Standard Practice for Steel Buildings and Bridges*.

This Practice does not include requirements that may be applicable for structures that require special seismic detailing.

## 2. References

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Applicable parts of the following Practices, industry codes and standards, and government regulations shall be considered an integral part of this Practice. The edition in effect on the date of contract award shall be used, except as otherwise noted. Short titles are used herein where appropriate.

### 2.1 Process Industry Practices (PIP)

- PIP STS05130 - *Structural and Miscellaneous Steel Fabrication Specification*

### 2.2 Industry Codes and Standards

- American Institute of Steel Construction (AISC)
  - ANSI/AISC 303-16 - *Code of Standard Practice for Steel Buildings and Bridges*
  - AISC 325 - *Steel Construction Manual*
  - AISC 326 - *Detailing for Steel Construction*
  - ANSI/AISC 360-16 - *Specification for Structural Steel Buildings*
- ASTM International (ASTM)
  - ASTM A6/A61M - *Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling*
  - ASTM A5/A36M - *Standard Specification for Carbon Structural Steel*
  - ASTM A53/A53M - *Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless*
  - ASTM A106/A106M - *Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service*
  - ASTM A108 - *Standard Specification for Steel Bar, Carbon and Alloy, Cold-Finished*
  - ASTM A123/A123M - *Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products*
  - ASTM A143/A143M - *Standard Practice for Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel Products and Procedure for Detecting Embrittlement*
  - ASTM A307 - *Standard Specification for Carbon Steel Bolts and Studs, and Threaded Rod 60,000 PSI Tensile Strength*