



PROCESS  
INDUSTRY  
PRACTICES

COMPLETE REVISION  
*July 2018*

***Structural***

## PIP STF05501 Fixed Ladders Fabrication Details

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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.

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### **PUBLISHING HISTORY**

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## 1. Scope

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This Practice describes requirements for fabricating typical *OSHA*-regulated fixed ladders and cages for open structures, miscellaneous platforms, and vessels for regular operational access and egress.

## 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 STF05520 - *Pipe Guards and Handrails Fabrication Details*
- PIP STF05521 - *Angle Guards and Handrails Fabrication Details*
- PIP STF05535 - *Vessel Circular Platform Fabrication Details*
- PIP STI03310 - *Concrete Typical Details*
- PIP STS05120 - *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*
- ASTM International (ASTM)
  - ASTM A36/A36M - *Standard Specification for Carbon Structural Steel*
  - ASTM A307 - *Standard Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength*

### 2.3 Government Regulations

The following government document has been used as a reference in the development of this Practice.

- U.S. Department of Labor (DOL) - Occupational Safety and Health Administration (OSHA)
  - *Regulations 29 CFR 1910 Subpart D - Walking-Working Surfaces - Final Rule Published in Federal Register, Volume 81, No. 223, on November 18, 2016 (referred to as "OSHA" in this Practice)*

## 3. Definitions

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This Practice uses the same terminology as *AISC* and *OSHA*. After each definition, the source document is indicated in parentheses. “(*AISC*)” refers to *ANSI/AISC 303-16*. “(*OSHA*)” refers to *OSHA Regulations 29 CFR 1910 Subpart D*. “(*PIP*)” indicates PIP definitions not specifically provided by *AISC* or *OSHA*.

*cage*: An enclosure mounted on the side rails of a fixed ladder or fastened to a structure behind the fixed ladder that is designed to surround the climbing space of the ladder. A cage also is called a “cage guard” or “basket guard.” (*OSHA*)