



PROCESS
INDUSTRY
PRACTICES

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Machinery

PIP REEP006
Pump Selection Guidelines

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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1. Scope

This Practice describes guidelines for selecting appropriate types of centrifugal and positive displacement pumps for specific process services. This Practice does not cover every pump application or every type of pumping device available.

2. References

Applicable parts of the following Practices, industry codes and standards, and references shall be considered an integral part of this Practice. Short titles are used herein where appropriate.

2.1 Process Industry Practices (PIP)

- PIP REIE686/API RP686 - *Recommended Practices for Machinery Installation and Installation Design*
- PIP REIE686A - *Recommended Practice for Machinery Installation and Installation Design (Supplement to PIP REIE686/API RP686)*
- PIP REEE003 - *Guidelines for General Purpose Non-lubricated Flexible Couplings*
- PIP RESP73H - *Application of ASME B73.1 - 2012 Specification for Horizontal End Suction Centrifugal Pumps for Chemical Process*
- PIP RESP73V - *Application of ASME B73.2 - 2003 Specification for Vertical In-Line Centrifugal Pumps for Chemical Process*

2.2 Industry Codes and Standards

- American Petroleum Institute (API)
 - API 610 - *Centrifugal Pumps for Petroleum, Petrochemical and Natural Gas Industries*
 - API 611 - *General-Purpose Steam Turbines for Petroleum, Chemical, and Gas Industry Services*
 - API 612 - *Petroleum, Petrochemical and Natural Gas Industries-Steam Turbines-Special-purpose Applications*
 - API 614 - *Lubrication, Shaft-sealing, and Control-Oil Systems and Auxiliaries*
 - API 685 - *Sealless Centrifugal Pumps for Petroleum, Petrochemical, and Gas Industry Services*
- American Society of Mechanical Engineering (ASME)
 - ASME B73.1 - *Specification for Horizontal End Suction Centrifugal Pumps for Chemical Process*
 - ASME B73.2 - *Specification for Vertical In-Line Centrifugal Pumps for Chemical Process*
 - ASME B73.3 - *Specification for Sealless Horizontal End Suction Metallic Centrifugal Pumps for Chemical Process*