Recommended Practice for Machinery Installation and Installation Design

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Chapter 1—Introduction

Downstream Segment

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Recommended Practice for Machinery Installation and Installation Design
Chapter 1—Introduction

1 Scope

1.1 Purpose

This recommended practice (RP) is intended to provide recommended procedures, practices, and checklists for the installation and precommissioning of new, existing, and reapplied machinery and to assist with the installation design of such machinery for petroleum, chemical, and gas industry services facilities. In general, this RP is intended to supplement vendor instructions and the instructions provided by the original equipment manufacturer (OEM) should be carefully followed with regard to equipment installation and checkout.

Most major topics of this RP are subdivided into sections of “Installation Design” and “Installation” with the intent being that each section can be removed and used as needed by the appropriate design or installation personnel.

1.2 Life Cycle Cost

It is the intent of this document to facilitate machinery installations that will provide the user with a reduced overall life-cycle cost of equipment ownership.

1.3 Contractual Requirements

API 686 is written such that it can be used as a contractual document between an owner company and an engineering and construction (E&C) contractor. The major benefit is that it provides a detailed scope of supply for machinery installation requirements, with acceptance criteria, and documentation requirements. There is then no ambiguity amongst multiple E&C bidders as to the requirements for project machinery installation (i.e. everyone is on an even playing field).

1.4 Equipment Classification

This RP is intended to address those installation and construction procedures associated with all machinery. Additional “special-purpose” requirements are covered at the end of each section as required.

1.5 Alternative Installation

The installation contractor or design contractor may offer alternative methods of equipment installation as mutually agreed upon by the user and equipment manufacturer.

1.6 Conflicting Requirements

Any conflicts between this RP and/or the manufacturers’ recommended procedures shall be referred to the user-designated machinery representative for resolution before proceeding.

2 Definitions

For the purposes of this document, the following definitions apply.

2.1
alignment
The process of reducing the misalignment of two adjacent shafts connected by a coupling so that the center of rotation for each shaft is as near collinear as practical during normal operation.