Special Purpose Couplings for Petroleum, Chemical and Gas Industry Services

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ISO 10441:2007 (Identical), Petroleum, petrochemical and natural gas industries—Flexible couplings for mechanical power transmission—Special-purpose applications

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Foreword

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ISO 10441 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 6, *Processing equipment and systems*.

This second edition cancels and replaces the first edition (ISO 10441:1999), which has been technically revised.

Introduction

This International Standard was developed from the API Std 671, 3rd edition, 1998. It is intended that the 4th edition of API Std 671 will be identical to this International Standard.

Users of this International Standard should be aware that further or differing requirements may be needed for individual applications. This International Standard is not intended to inhibit a vendor from offering, or the purchaser from accepting alternative equipment or engineering solutions for the individual application. This may be particularly appropriate where there is innovative or developing technology. Where an alternative is offered, the vendor should identify any variations from this International Standard and provide details.

This International Standard requires the purchaser to specify certain details and features.

A bullet (●) at the beginning of a subclause or paragraph indicates that either a decision is required or further information is to be provided by the purchaser. This information should be indicated on the datasheet(s), typical examples of which are included as Annex J; otherwise it should be stated in the quotation request or in the order.

Petroleum, petrochemical and natural gas industries — Flexible couplings for mechanical power transmission — Special-purpose applications

1 Scope

This International Standard specifies the requirements for couplings for the transmission of power between the rotating shafts of two machines in special-purpose applications in the petroleum, petrochemical and natural gas industries. Such applications are typically in large and/or high speed machines, in services that can be required to operate continuously for extended periods, are often unspared and are critical to the continued operation of the installation. By agreement, it can be used for other applications or services.

Couplings covered by this International Standard are designed to accommodate parallel (or lateral) offset, angular misalignment and axial displacement of the shafts without imposing unacceptable mechanical loading on the coupled machines. It is applicable to gear, metallic flexible element, quill shaft and torsionally resilient type couplings. Torsional damping and resilient type couplings are detailed in Annex A; gear-type couplings are detailed in Annex B and quill shaft style couplings are detailed in Annex C.

This International Standard covers the design, materials of construction, manufacturing quality, inspection and testing of special-purpose couplings.

This International Standard does not define criteria for the selection of coupling types for specific applications.

This International Standard is not applicable to other types of couplings, such as clutch, hydraulic, eddy-current, rigid, radial spline, chain and bellows types.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 262, *ISO general-purpose metric screw threads — Selected sizes for screws, bolts and nuts*

ISO 286-2, *ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts*

ISO 2491, *Thin parallel keys and their corresponding keyways (Dimensions in millimetres)*

ANSI Y14.2M[1)], *Line Conventions and Lettering*

ANSI/AGMA 9000[2)], *Flexible Couplings — Potential Unbalance Classification*

ANSI/AGMA 9002, *Bores and Keyways for Flexible Couplings (Inch Series)*

ANSI/AGMA 9003, *Flexible Couplings — Keyless Fits*

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2) American Gear Manufacturers Association, 500 Montgomery Street, Suite 350, Alexandria, VA 22314-1560, USA.