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Petroleum and natural gas industries — Drilling and production equipment —

Part 2: Flow-control devices for side-pocket mandrels

Industries du pétrole et du gaz naturel — Équipement de forage et de production —

Partie 2: Dispositifs de régulation de la vitesse d'écoulement pour raccords à poche latérale

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Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 17078-2 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 4, *Drilling and production equipment*.

ISO 17078 consists of the following parts, under the general title *Petroleum and natural gas industries — Drilling and production equipment*:

— *Part 1: Side-pocket mandrels*

— *Part 2: Flow-control devices for side-pocket mandrels*

— *Part 3: Running, pulling and kick-over tools, and latches for side-pocket mandrels*

A part 4 dealing with practices for side-pocket mandrels and related equipment is under development.

Introduction

This part of ISO 17078 has been developed by users/purchasers and suppliers/manufacturers of subsurface flow-control devices used in side-pocket mandrels (hereafter called flow-control devices) intended for use in the worldwide petroleum and natural gas industry. This part of ISO 17078 is intended to provide requirements and information to all parties who are involved in the specification, selection, manufacture, testing and use of flow-control devices. Further, this part of ISO 17078 addresses supplier/manufacturer requirements that set the minimum parameters with which suppliers/manufacturers shall comply to claim conformity with this part of ISO 17078.

This part of ISO 17078 has been structured to support varying requirements in environmental service classes, design validation, product functional testing and quality control grades. These variations allow the user/purchaser to select the grade for a specific application.

Well environmental service classes. There are four environmental service classes for flow-control devices that provide the user/purchaser with a range of choices from which to select products to meet varying environmental conditions.

Design validation grades. There are three design validation grades for flow-control devices that provide the user/purchaser with a range of technical and performance requirements. This ensures that the products supplied according to this part of ISO 17078 meet the requirements and that the user/purchaser is able to compare these requirements with its preference or application and determine whether additional requirements are placed on the supplier/manufacturer.

It is important that users of this part of ISO 17078 be aware that requirements in addition to those outlined herein can be needed for individual applications. This part of ISO 17078 is not intended to inhibit a supplier/manufacturer from offering, or the user/purchaser from accepting, alternative equipment or engineering solutions. This can be particularly applicable where there is innovative or developing technology. Where an alternative is offered, it is the responsibility of the supplier/manufacturer to identify any variations from this part of ISO 17078 and provide details.

Product functional testing grades. There are three product functional testing grades for flow-control devices that provide the user/purchaser with a range of choices for confirming that individual products manufactured under this part of ISO 17078 meet the design specifications.

Quality control grades. There are two quality control grades that provide the user/purchaser with the choice of requirements to meet specific preferences or applications. Additional quality upgrades can be specified by the user/purchaser as supplemental requirements.

In addition to this document, ISO 17078-1 provides requirements for side-pocket mandrels used in the petroleum and natural gas industry. ISO 17078-3, to be published, is intended to provide requirements for running, pulling and kick-over tools, and latches used in conjunction with side-pocket mandrel flow-control devices.