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Supplier's documentation of equipment

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Foreword

NORSOK Z-018:2019 was adopted as NORSOK Standard 2019-11-10.

NORSOK Z-018:2019 supersedes NORSOK Z-018 Edition 1, May 2013.

NORSOK is an acronym for the competitive position of the Norwegian continental shelf and comprise petroleum industry standards in Norway. The collaboration initiative in 1993 between the authorities and the petroleum industry initiated the development of NORSOK standards.

Reducing the project execution time and developing and operating cost for petroleum installations on the Norwegian shelf was the target.

The intention for the Petroleum industry is to develop and use standards providing good technical and cost effective solutions to ensure that the petroleum resources are exploited and managed in the best possible way by the industry and the authorities. The industry will actively contribute to the development and use of international standards in the global market.

The NORSOK standards shall:

- bridge the gap based on experiences from the Norwegian continental shelf where the international standards are unsatisfactorily;
- replace oil company specifications where possible;
- be available as references for the authorities' regulations;
- be cost effective; and
- promote the Norwegian sector as an attractive area for investments and activities.

Developing new NORSOK standards and regular maintenance of existing standards shall contribute to maintain the competitiveness both nationally and internationally for the Norwegian petroleum industry.

The NORSOK standards are developed by experts from the Norwegian petroleum industry and approved according to the consensus principles as laid down by the guidelines given in NORSOK A-001 N directive.

The NORSOK standards are owned by the Norwegian Oil and Gas Association, the Federation of Norwegian Industries and the Norwegian Shipowners' Association. They are managed and published by Standards Norway.

Annex A and B are informative.

The 2013 edition of Z-018 mainly contained definitions, no precise requirements for deliverables per equipment type. Discipline requirements has been established in the 2019 edition and they are made digitally available in TIRC STI (Technical Information Requirements Catalogue) on tirc.epim.no.

In this edition, information about the normative database TIRC -STI has been added. Subclause numbering in 5.4 has been removed due to missing titles. Only minor editorial updates have been done to the remaining document.

Content comments to the requirements on tirc.epim.no can be sent to z-ti@standard.no.

Supplier's documentation of equipment

1 Scope

This NORSOK standard specifies the documentation process and deliverables for petroleum industry equipment.

This NORSOK standard defines life cycle documentation such as

- describing/evaluating a bid,
- engineering a plant which the equipment shall be a part of,
- receiving, handling, preserving, installation and commissioning,
- start, operation, maintenance, decommissioning and removal,
- verifying that the delivery is according to specified requirements.

This NORSOK standard gives an overall description of different types of documents and a way to group these. It describes deliverables at different phases of a delivery. Further detailing is foreseen, where suitable.

This NORSOK standard applies to documentation on any media.

This NORSOK standard is based on NS 5820 and has replaced the NS standard within the petroleum industry.

2 Normative references

The following referenced documents contain text which fully or in part is part of the requirements in the document. For dated references, only the edition cited applies. For undated references, the latest edition of the cited document applies (including amendments).

TIRC STI (Technical Information Requirements Catalogue): available at <https://tirc.epim.no>

NS-EN ISO 12100, *Safety of machinery – Basic concepts, general principles for design – Part 1: Basic terminology, methodology*

NORSOK Z-008, *Risk based maintenance and consequence classification – Rev. 3, June 2011*

3 Terms and definitions

In this document, the following terms and definitions apply.

3.1

as-built

last revision of a life cycle information item updated to reflect the true status of completed work

Note 1 to entry: A limited amount of information stored on various types of media.

3.2

can (possibility and capability)

1: expression in the content of a document conveying expected or conceivable material, physical or causal outcome.

2: expression in the content of a document conveying the ability, fitness, or quality necessary to do or achieve a specified thing

Note 1 to entry: Possibility and capability is expressed using the verbal forms specified in in ISO/IEC Directives, Part 2 clause 7.5 Table 6.

3.3

certificate

document which confirms that a product conforms to a given standard or specification information prepared for a special purpose, e.g. to describe, specify, report or verify

3.4

certificate of conformity

document issued under the rules of a certification system, indicating that adequate confidence is provided that a duly identified product, process or service is in conformity with a specific standard or other normative document

3.5

contractor

provider of one or more of the following services directly to customer: Engineering (E), Procurement (P), Construction (C), Installation (I) and Hook-up (H)

3.6

customer/client

contract party which in its own name or on behalf of others, issues an inquiry or places an order

3.7

design, fabrication and installation résumé

DFI

documents only applicable for permanently installed load bearing structures to provide a concentrated summary containing the most relevant data from the design, fabrication and installation phase, including which areas are the most critical and a general description of the installation at the start of the operational phase

3.8

dispatch dossier

documents relevant for handling, transportation and preparation prior to commissioning and start up

Note 1 to entry: To be physically shipped with the equipment.

3.9**document**

a limited amount of information stored on various types of media

3.10**documentation**

information prepared for a special purpose, e.g. to describe, specify, report or verify

3.11**final documentation/documentation for operation**

documentation that consists of the latest revision of the documentation required to operate maintain the delivery

3.12**International System of Units****SI**

system of units, based on the International System of Quantities, their names and symbols, including a series of prefixes and their names and symbols, together with rules or their use, adopted by the General Conference on Weights and Measures (CGPM)

[SOURCE: NS-EN ISO 80000-1:2009, *Quantities and units-Part 1: General*]

3.13**Life cycle information****LCI**

all information necessary in all phases of the project execution and equipment life span including both information delivered to customer and information retained on behalf of customer

3.14**may (permission)**

expression in the content of a document conveying consent or liberty (or opportunity) to do something

Note 1 to entry: Permissions are expressed using the verbal forms specified in ISO/IEC Directives Part 2 clause 7.4 Table 5.

3.15**native format**

original editable file format used to produce and update the document/drawing

3.16**packaged units**

system consisting of equipment, components, instruments and structure elements pre-assembled into a functional unit on a transportable skid or frame

3.17**recipient**

person or organization who receives, unpacks and installs the equipment

Note 1 to entry: The recipient may also take responsibility for intermediate storage, preservation and preparation of the equipment and documentation prior to take over by user.

Note 2 to entry: The recipient to be defined by the customer.

3.18

retained documentation

documentation, which is not submitted to the customer, but available on request for information purposes for an agreed period of time

Note 1 to entry: This does not include supplier or contractor internal documents which can be reviewed on suppliers or contractors' premises.

3.19

shall (requirement)

expression in the content of a document conveying objectively verifiable criteria to be fulfilled and from which no deviation is permitted if compliance with the document is to be claimed

Note 1 to entry: Requirements are expressed using the verbal forms specified in ISO/IEC Directives, Part 2 clause 7.2 Table 3.

3.20

should (recommendation)

expression in the content of a document conveying a suggested possible choice or course of action deemed to be particularly suitable without necessarily mentioning or excluding others

Note 1 to entry: Recommendations are expressed using the verbal forms specified in ISO/IEC Directives, Part 2 clause 7.3 Table 4.

Note 2 to entry: In the negative form, a recommendation is the expression that a suggested possible choice or course of action is not preferred but it is not prohibited.

3.21

standard documents

documents which supports standard equipment/products, and general documents that support tailor made equipment/products

Note 1 to entry: The information should not include any plant/project specific identification/information.

3.22

standard equipment and tools

manufacturer's equipment/unit typically ordered from manufacturer's catalogue

Note 1 to entry: Standard equipment is identified with a unique type/model identification built up by the manufacturer. Standard equipment may include reused part numbers from previous delivery without being a part of a standard catalogue.

3.23

sub-contractor

provider of services directly to Contractor(s)

3.24

sub-supplier

provider of services directly to Supplier(s)

3.25

supplier

party that is responsible for the product, process and/or service and is able to ensure that quality assurance is exercised

Note 1 to entry: The definition may apply to manufacturers, distributors, importers, assemblers, service organizations, etc.

3.26**traceability**

ability to trace the history, application or location of an item or activity, or similar items or activities, by means of recorded identification

3.27**user**

person or organization responsible for the equipment in operation

Note 1 to entry: The user to be defined by the customer

3.28**user documentation**

all documentation required to lift, handle, install, operate and maintain the equipment

3.29**verification of conformity**

confirmation, by examination of evidence, that a product, process or service fulfils specified requirements

3.30**verifying documentation**

documentation which confirms that verification has taken place and that certain defined requirements or results have been achieved

4 Symbols and abbreviations

For this document, the following symbols and abbreviations apply.

CDRL	contractor document requirement list	CMDL	contractor master document list
DFI	design, fabrication and installation	DFO	documentation for operation
DN	nominal diameter		
DRL	document requirement list		
EN	European Standard		
ENS	Engineering Numbering System (ENS)		
NOTE	ENS defines clear and unambiguous document and tag coding in order to ensure that the user obtains documentation and equipment with the required document and tag code during all phases.		
FAT	factory acceptance test		
FRB	fabrication record book		
HSE	health, safety and environment		
IEC	International Electro technical Commission		
IOM	installation, operation and maintenance		
ISO	International Organization for Standardization		
MRB	manufacturing record book		
MSDS	material safety data sheet		
NDE	non-destructive examination		