

Preservation

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Foreword

The NORSOK standards are developed by the Norwegian petroleum industry to ensure adequate safety, value adding and cost effectiveness for existing and future petroleum industry developments.

The NORSOK standards are prepared to complement available international standards and fill the broad needs of the Norwegian petroleum industry. Where relevant NORSOK standards will be used to provide the Norwegian industry input to the international standardisation process. Subject to development and publication of international standards, the relevant NORSOK standard will be withdrawn.

These standards are developed according to the consensus principle generally applicable for most standards work and according to established procedures defined in NORSOK A-001

The preparation and publication of the NORSOK standards is supported by OLF (The Norwegian Oil Industry Association) and TBL (Federation of Norwegian Manufacturing Industries). NORSOK standards are administered and issued by NTS (Norwegian Technology Centre).

Annex A is normative.

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1 Scope

This standard defines the principles and structure to ensure that equipment and systems are kept preserved during all phases of the project, before taken into use.

2 Normative references

The following standards include provisions which, through reference in this text, constitute provisions of this NORSOK standard. Latest issue of the references shall be used unless otherwise agreed. Other recognized standards may be used provided it can be shown that they meet or exceed the requirements of the standards referenced below.

FEAM Regulation for Electrical Installations, Maritime Installations.

3 Definitions and abbreviations

3.1 Definitions

Executor:	An organisation, supplier, contractor that performs a predefined scope of work.
Preservation:	The protection, and preventive maintenance carried out on equipment and systems before it is taken into use.
Initial Preservation:	The application of specified preservatives and fitting of specified protection to any equipment/system by suppliers prior to delivery, to maintain the equipment/system unimpaired.
Preservation Maintenance:	The periodic activities to confirm that the initial preservation is intact and functioning. This also includes repair of deteriorated initial preservation.
Preservation Record:	The different forms for each discipline, which together with this standard defines and records the preservation requirements and activities.
Preservation Dossier:	Preservation documentation compiled in MC packages. (Paper or electronic format)
Preservation checklist:	The preservation checklist, which defines the minimum requirements to maintain the initial preservation.
Suppliers' Additional Maintenance Preservation Requirement:	Defines suppliers' additional requirements to keep the initial preservation intact.
Preservation Program:	Is a computerised system, which identifies the preservation requirements and the last and the next date for preservation based on periodic intervals for the equipment.
MC package:	A practical unit of the scope of work for one discipline within a Commissioning package.
Commissioning package:	A practical scope of work unit within a System or Subsystem for Commissioning, constituting a functional unit, which can be tested by commissioning to confirm its suitability for operation.

3.2 Abbreviations

HVAC	Heating, Ventilation and Air Conditioning
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MC

Mechanical Completion

4 Preservation principles

4.1 Functional requirements

The functional requirements for preservation are to apply and maintain the preservation condition and operability of systems and equipment before taken into use.

4.2 Preservation Phases

4.2.1 Supplier phase

In the Supplier phase, Supplier is responsible for:

- a) Identification and description of initial and any additional preservation requirements.
- b) Performing initial preservation.
- c) Performing preservation maintenance.
- d) Filling out preservation labels and fix it to the equipment.
- e) Documenting preservation activities on preservation records.
- f) Filing of toxicological data sheets in the preservation dossier for all preservation products being used.
- g) Preparation of preservation dossier.
- h) Preparation of procedure for packing, marking and protection of skid / equipment including list of preservation materials and methods used.
- i) Preparation of a procedure for storage of the skid / equipment and for maintenance preservation during the construction period at the fabrication site. This procedure shall also include method for removal of the preservation used on the skid / equipment, and shall be included in the preservation dossier.

4.2.2 Preservation maintenance phase

In the preservation maintenance phase, executor is responsible for:

- a) Timely issue of requisite preservation record sheets and labels to equipment suppliers.
- b) Inspection of equipment on receipt.
- c) Filling out preservation labels and fix it to the equipment.
- d) Preservation maintenance according to requirements and suppliers additional maintenance preservation requirements.
- e) Updating the computer based preservation program.
- f) Reinstating preservation in accordance with requirements.
- g) Filing of toxicological data sheets in the preservation dossier for all preservation products being used.
- h) Recording preservation activities on preservation records.
- i) Preparation of preservation dossier where applicable.

4.3 Status reporting

4.3.1 Preservation program

An electronic based system should be used to administrate the periodic preservation requirements of equipment and systems, and to record the status of the same. The engineering indices/registers shall be used for identification of items for which preservation is required. Executor shall keep the preservation system updated.

4.3.2 Status report

Executor shall report initial preservation status by signing the applicable preservation Record sheets. Executor shall, when they receive these documents, register the status indicated on the records, into the preservation program.

4.4 Common requirements

4.4.1 Common requirements

Ensure that preservation requirements are included in purchase orders and contracts.

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