

PROSJEKT OCEAN SPACE CENTRE

REQUIREMENTS FOR SUPPLIER DOCUMENTATION INCLUDING DFO

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1 Introduction

1.1 Objective

The purpose of this document is to define the scope and type of supplier documentation including Documentation for Operation (DFO) to be delivered to Company as part of the Works.

1.2 Definitions and abbreviations

Definitions:

Company:	Statsbygg, which is the Norwegian government's key advisor in construction and property affairs, building commissioner, property manager and property developer.
Contractor:	Means the party named as such in the Form of Agreement
Subcontractor:	Means a Third Party who has entered into an agreement with the Contractor for the supply of goods or services in connection with the Work.
End-user:	Sintef Ocean and NTNU
Work:	Means all work which Contractor shall perform or cause to be performed in accordance with the Contract
Company Materials:	Means equipment, systems, and/or materials supplied by Company and which are to be incorporated in the Contract Object.

Abbreviations:

DFO	-	Documentation for Operation
FAT	-	Factory Acceptance Test
HLCC	-	HydroLab Centralized Control
MDP	-	Master Document Plan
NS	-	Norwegian Standard
OB	-	Ocean Basin
OSC	-	Ocean Space Centre
SAT	-	Site Acceptance Test
SMB	-	Seakeeping and Manoeuvring Basin

2 Requirements

2.1 General

This document gives general requirements for supplier documentation including DFO.

Unless otherwise specified documentation shall be according to the following standards:

NS5820 – Suppliers documentation of equipment

NS3456 – Documentation for management, operation, maintenance and development of construction work

2.2 Supplier Master Document List

Contractor shall create a list of content comprising all supplier documents that will be delivered, including DFO. This list shall be based on MDP and shall be created in collaboration with Company.

2.3 Format

2.3.1 Paper formats

Documentation shall not be delivered in paper formats.

2.3.2 Digital formats

Documentation shall be delivered in digital formats as given in the following documents:

- OSC-SB-O-SD-00012 Action plan for digitisation, with following attachments
 - OSC-SB-Å-SD-00001 General Attributes and Properties in BIM Models
 - OSC-SB-Å-SD-00002 BIM Requirements for Special Equipment
- SIMBA 2.0 General requirements
- Drawings shall be delivered in dwg-format and pdf-format.

2.3.3 Coordinates

Map coordinates, projection and datums for BIM models are specified in the BIM chapter of the Action Plan for Digitisation.

3 Documentation

3.1 General

This section describes the content requirements for specific documents. These requirements do not replace, but supplement the requirements given in relevant standards as described in section 2.

Documents described in this section shall be produced to fulfil requirements in;

- a) design, manufacturing, assembly, installation and testing
- b) operation and maintenance phase, governmental requirements and future modifications.

Documents for operation shall enable Company to manage, operate, maintain and future modify all systems and installations that are part of the Contract Object. Contractor shall supply any additional documents required to manage, operate, maintain and future modify all systems and installations that are part of the Contract Object.

The DFO shall include the following:

Document description	Document type	Due date
Supplier Master Document List		2 WAO
Delivery and production plan		6 WAO
Quality Plan		6 WAO
Inspection and test Plan		12 WAO
List of sub-suppliers		12 WAO
Material specifications		12 WAO
System descriptions		12 WAO
Technical specifications including consumption data		12 WAO
Product data sheets		12 WAO
Tagging and marking guideline		12 WAO
Operation and maintenance documents		4 WBD
Faultfinding diagrams and procedures		4 WBD
Safety and verification documents		8 WBT
Main layouts, plans and sections, including relevant detail drawings		12 WAO
Piping and Instrument diagram (P&ID)		12 WAO
Control- and safety system block diagram		12 WAO
Electrical and instrumentation layouts / arrangement drawings		12 WAO
Single line diagrams		12 WAO
Electrical circuit diagrams		24 WAO
Electrical calculations		24 WAO
Cable plan		24 WAO
Electrical and instrumentation wiring diagrams		24 WAO
Cable lists		24 WAO
I/O lists		24 WAO
Installation documents		4 WBD
FAT and SAT procedures		8 WBT
Test protocols and reports		2 WAT
Training documentation		4 WBT
Calculations, if important for the maintenance, operation and future modifications.		4 WBD
Equipment lists		4 WBD
Spare part lists and list of special tools		4 WBD
Handling, storage and preservation Instructions		4 WBD
Sample of BIM model (to check format etc.)		6 WAO
BIM models		12 WAO
Discipline .dwg models and drawings including information file.		12 WAO
Declarations of Conformity		4 WAD
As built documentation, including BIM models		4 WAD

Due dates abbreviations:

- WAO Weeks After Order
- WBT Weeks before Test
- WAT Weeks After Test
- WBD Weeks Before Delivery
- WAD Weeks After Delivery

Detailed documentation shall be prepared for all essential installations/components that do not have separate, approved system drawings. Documents and drawings containing closely related information may be merged together.

For documentation delivered by catalog, only an extract of the relevant information shall be delivered.

4 Attachments

5 References