



SPECIFICATION

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COATING



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TABLE OF CONTENTS

1	INTRODUCTION	3
2	QUALIFICATION	3
3	SUBMITTALS	3
4	QUALITY CONTROL	3
5	COATING TYPES	4
5.1	Wet painting	4
5.1.1	INDUSTRIAL COATING	4
5.1.2	NORSOK SYSTEM 1	4
5.1.3	NORSOK SYSTEM 7	4
5.1.4	DOCUMENTATION	4
5.2	Powder Coating	4
5.3	Anodizing	5
5.3.1	ANODIZING - TYPE II	5
5.3.2	ANODIZING - TYPE III	5
5.3.3	DOCUMENTATION	5
5.4	PTFE (Xylan)	6
5.4.1	REQUIREMENTS	6
5.4.2	DOCUMENTATION	7
5.5	PTFE – United Kingdom Continental Shelf	7
6	HOLLOW PROFILES	8
7	COATING FREE AREAS	8

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1 INTRODUCTION

This specification has the intention of describing requirements when coating is specified on drawing. In addition, the document refers to standards to comply with based on environment and coating type.

The drawing is the governing document and all requirements on the drawing shall be implemented.

If a drawing clearly lacks information, then company buyer shall be contacted. This to ensure corrections are made on the drawing and to ensure the quality of the delivery.

Any specific requirements listed on the drawing applies and supersedes this specification.

2 QUALIFICATION

If a referenced standard require qualification, then it is the supplier's responsibility to ensure compliance.

NOTE: All reference standards and related specifications shall be current issue or latest revision at the date of tender advertisement.


3 SUBMITTALS

Before commencing with the application of the specified coating system; the supplier shall submit coating procedures according to the referenced DRL/drawing notes.

Documentation shall be delivered through Oceaneering web application according to referenced DRL/drawing notes.

4 QUALITY CONTROL

Company will perform spot checks on coated equipment. Project specific QC-checks may be required in some cases.

	SPECIFICATION	Rev. D	Page 4 of 8
	COATING	970115749	

5 COATING TYPES

The desired coating type and colour will be listed on the drawing. It is the supplier's responsibility to ensure that the product coating complies with the drawing information.

5.1 WET PAINTING

When applying wet paint, NORSOK M-501 shall be used if not otherwise stated on the drawing. Deviations from specified standards may be allowed with written authorization from company.

NOTE: For United Kingdom Continental Shelf equivalent standard BS EN ISO 12944 may be used.

5.1.1 INDUSTRIAL COATING

The following minimum requirements shall be applied when the drawing reference "Industrial Coating":

Surface Preparation – Grit/Bead-blasting followed by chemical cleaning

Priming – Zinc based primer

Topcoat – Minimum one layer to ensure coverage

5.1.2 NORSOK SYSTEM 1

When NORSOK System 1 is referenced on the drawing, the product shall comply to NORSOK M-501.

5.1.3 NORSOK SYSTEM 7


Only when NORSOK system 7 is specified on the drawing System 7B shall be used according to NORSOK M-501.

5.1.4 DOCUMENTATION

Equipment coated according to NORSOK systems shall be delivered with a signed and dated certificate that coincides with referenced standard certificate requirements. Other standards and/or customer specific specifications may also be a requirement, in these cases; a note will be implemented on the drawing.

5.2 POWDER COATING

If Powder Coating is called out on the drawing, then company buyer shall be contacted for alternative coatings to be used.

	SPECIFICATION	Rev. D	Page 5 of 8
	COATING	970115749	

5.3 ANODIZING

The requirement listed in the standards and specific system requirements shall be implemented. Deviations from listed standards may be allowed with the express written authorization from company. If a drawing clearly lacks information, then company buyer shall be contacted.

5.3.1 ANODIZING - TYPE II

- Requirement; NS-EN ISO 7599:2012
- Colour is called out on drawing
- Jig-points should be specified on drawing

5.3.2 ANODIZING - TYPE III

- Requirement; MIL-A-8625E or ISO 10074:2010
- Jig-points are required and needs to be specified on drawing
- The surface area should be stated on the drawing
- Black is the default colour, natural is an option but the result can very dependent on the alloy

5.3.3 DOCUMENTATION

Anodized equipment shall be delivered with a signed and dated COC that is according to the referenced standard. Other standards and/or customer specific specifications may also be a requirement, in these cases; a note will be implemented on the drawing. Documents to be submitted through Oceaneering web application.

5.4 PTFE (XYLAN)

Company use PTFE, e.g. Xylan coating from Whitford. The requirement listed in this specification shall be implemented. Deviations from the below listed requirements may be allowed with an express written authorization from company.

Note: If the drawing calls for Xylan coating on aluminium parts supplier shall use a coating specification suitable for this material.

5.4.1 REQUIREMENTS

Product:

Whitford waterborne product **Xylan 1424** shall be used.

Procedure:

The subcontractor applying the coating shall establish a detailed coating procedure, in local language and in English. The procedure shall be submitted to OAS for approval prior to production. The procedure shall address the following items as a minimum:

- Materials, shapes and surface finish for which the procedure shall apply.
- Stepwise listing of all operations to be carried out.
- The document shall include a detailed listing of; consumables, production and inspection equipment.
- Detailed description of repair coating (touch-up).
- Frequency of inspection shall be stated.
- Detailed description of inspection and testing.
- A coating report form shall be included.
- A list stating the certification interval of test / inspection and production equipment shall be implemented.


Qualification:

To ensure the coating procedure coincides with the requirements listed in this section; the coating procedure shall be qualified as follows:

- A minimum of one representative part and a test coupon shall be coated according to the procedure. Ensure compliance with the requirements listed in this specification and or referenced client specification.
- The finished product shall be measured and accurately recorded after phosphate / coating.
- Adhesion testing per ISO 2409. Acceptance requirement level 2 or better.
- Curing test on production parts shall be carried out and recorded.
- A complete test report shall be established and submitted to OAS for approval.

Technical requirements:

- Grit for blasting prior to coating shall be aluminium oxide. The grit is for one time use or processed in such a way that maximum coating adherence will be obtained.

	SPECIFICATION	Rev. D	Page 7 of 8
	COATING	970115749	

- Non-stainless steel shall have a thin layer of Zinc phosphate underneath the PTFE coating. This is not applicable for stainless steels and Ni-based alloys.
- All PTFE coating shall be carried out in heated indoor facilities and the humidity shall be specified and checked during production.
- The curing temperature and time shall be accordance with the coating manufacturers recommendations.
- Curing shall be conducted in a furnace / oven with a suitable temperature control.
- Colour shall be black if not otherwise stated on drawing or in referenced specifications.
- The thickness shall be 25 +/- 7 micrometre unless the drawing state otherwise.
- When applying yellow or orange colour, a improved visual appearance is desired. Apply Xylan 1424 in two layers with a total thickness 40 +/- 7micrometer.

Inspection and testing:

- All surfaces where coating is specified shall be inspected visually according to established procedure.
- Curing condition shall be verified by testing on representative production parts with a suitable solvent according to established procedure.
- Adhesion testing per ISO 2409. Acceptance requirement level 2 or better.
- Verifying thickness according to the above listed requirements.
- All of the test and inspection equipment shall be under regular calibration according to established procedure.

5.4.2 DOCUMENTATION

Xylan coated equipment shall be delivered with a signed and dated certificate that coincides with the layout agreed upon during the qualification. Other standards and/or customer specific specifications may also be a requirement, in these cases; a note will be implemented on the drawing.

5.5 PTFE – UNITED KINGDOM CONTINENTAL SHELF

PTFE coating requirements for United Kingdom Continental Shelf is described in Oceaneering document Doc. No.: 980116686

6 HOLLOW PROFILES

When coating a steel structure with hollow profiles / sections, there is a requirement regarding internal corrosion protection:

- Larger hollow sections, if accessibility allows it, shall be coated internally with the system primer and a topcoat.
- Smaller hollow sections shall if the accessibility allow it; be coated internally with tectyl.

7 COATING FREE AREAS

In some cases, there will be a need to constrain the coated area; areas will be identified on the drawing.