



# Off-shore structures Surface treatment

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# Off-shore structures

## Typical structures

FPSO, FLNG

Rigs

Wind-mills





# Off-shore structures

## Surface treatment

Surface preparation of steel

Application of protective system





# Off-shore structures

## Requirements

### Long lifetime

- Structural 25 to 50 years
- Protective system 15 to 25 years

- In extreme aggressive environment





# Off-shore structures

## Requirements - Specification

Protective system

Dry film thickness

Surface preparation

Steelwork, cleanliness, roughness

Application

Dry film thickness, intervals

Inspection

Control, reporting

- Each to be documented / certified



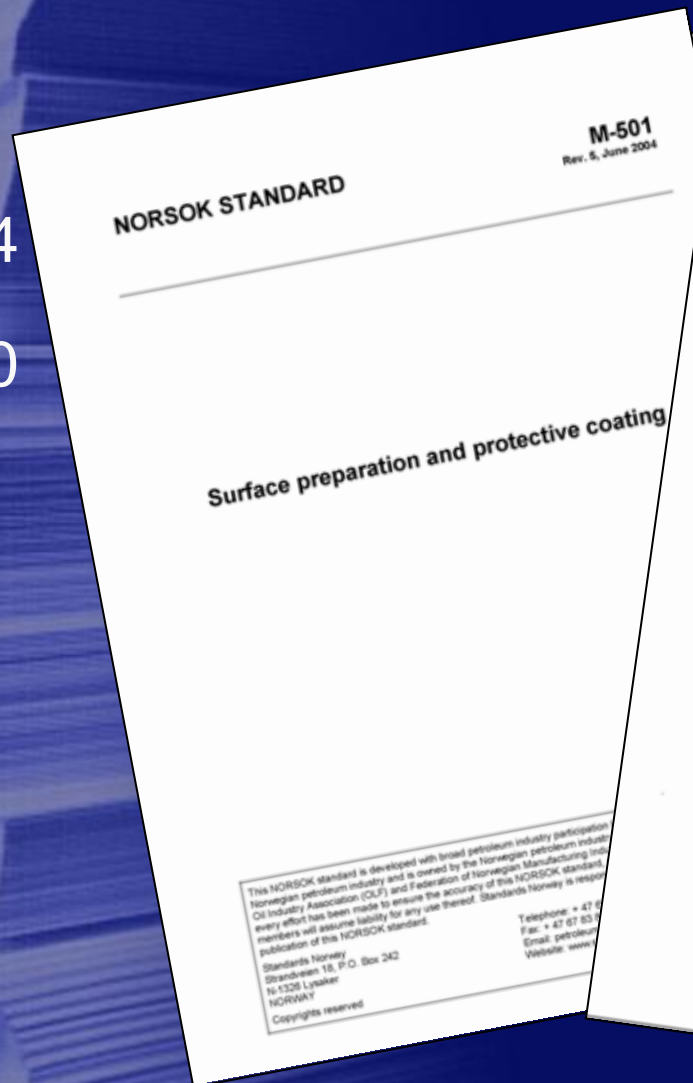
# Off-shore structures

## Requirements - Standards

NORSOK

ISO 12944

ISO 20340





# Off-shore structures

## Under-water areas

Cleanliness

Sa 2½, max. 20 mg/sqm soluble salts

Roughness

Medium (G), BN 10b

Paint system

Epoxy: 2 x 400 micron  
(+ cathodic protection)  
Fouling protection ?





# Off-shore structures

## Atmospheric exposed areas - 1

Cleanliness Sa 2½, max. 20 mg/sqm soluble salts

Roughness Medium (G), BN 10b

Paint system  
Zinc-(epoxy/silicate) : 1 x 60 micron  
Epoxy : 2 x 125 micron  
Polyurethane : 1 x 50 micron







# Off-shore structures

## Atmospheric exposed areas - 2

Cleanliness	Sa 3, max. 20 mg/sqm soluble salts
Roughness	Coarse(G), BN 11b
System	Zinc-(metallizing) : 1 x 60 micron
	Epoxy : 2 x 100 micron
	Polyurethane : 1 x 50 micron





# Off-shore structures

## Various tanks

Cleanliness

Sa 2½, max. 20 mg/sqm soluble salts

Roughness

Medium(G), BN 10b

System

Epoxy phenolic : 3 x 100 micron  
or

Epoxy phenolic : 2 x 150 micron



