

SYSTEMS FOR SUPERSTRUCTURE AND DECK FITTINGS**3104**

a six page issue

February 2011
revision of January 2010

Application areas: all ferrous and non ferrous metal surfaces of superstructure and deck fittings.

Contains following specifications:

- Specification 1: recoatable polyurethane/epoxy coating system
- Specification 2: recoatable polyurethane/epoxy coating system
- Specification 3: alkyd coating system
- Specification 4: chlorinated rubber/modified acrylic coating system
- Specification 5: water based acrylic coating system

GENERAL ASPECTS

With superstructures on vessels, aesthetic considerations are very much to the fore. Well maintained superstructures are a reflection of the care and attention enjoyed by the vessel.

Superstructure coating systems should have:

- good anticorrosive properties
- resistance to wind, rain, seawater
- non-yellowing properties
- good gloss retention
- easy to maintain

SURFACE PRETREATMENT

Steel: the quality of the secondary surface pretreatment affects the performance of the recommended paint systems.

It is not common practice to reblast a superstructure and deck fittings despite the fact that this pretreatment results in the best performance.

In general most types of shop primers are accepted provided that the surface is cleaned of all contamination and rust.

Sigmarine 24, Sigmarine 28 and SigmaCover 280 in particular have a good tolerance for substrates which are pretreated by means of mechanical cleaning.

Galvanised steel and aluminium; degreasing with a suitable detergent and removal of (zinc)salts by means of mechanical cleaning (e.g. by brushing with nylon brushes) followed by fresh water washing, drying and roughening up of the surface.

SYSTEMS FOR SUPERSTRUCTURE AND DECK FITTINGS

3104

February 2011

SPECIFICATION 1

recoatable polyurethane/epoxy system for SUPERSTRUCTURE with excellent durability and gloss retention

pretreatment

steel; blast cleaned to ISO-Sa2½, blasting profile 40 - 70 µm or power tool cleaned to ISO-St3

steel with approved shop primer; sweep blasted to SPSS-Ss or power tool cleaned to SPSS-Pt3 or SPSS-Pt2

galvanised steel and aluminium; degreasing with suitable detergent and removal of (zinc)salts by means of mechanical cleaning (e.g. by brushing with nylon brushes) followed by freshwater washing, drying and roughening up of the surface

paint system

SigmaPrime 700

100 µm

SigmaCover 456

75 µm

SigmaDur 550

50 µm

note

at temperatures below 5°C, SigmaPrime 700 can be replaced by SigmaPrime 700 LT

maintenance

should preferably be carried out to this specification

both SigmaCover 456 and SigmaDur 550 have good overcoating and good curing characteristics also below 0°C, which simplifies maintenance

For maintenance on board SigmaDur One can also be used as the final finish coat.

pretreatment

in case of hydrojetted to VIS WJ2/3 L or ISO Wa 2½ L SigmaCover 280 should be applied as first coat at a dft of 50 µm (for more info see sheet 1498)

SYSTEMS FOR SUPERSTRUCTURE AND DECK FITTINGS

3104

February 2011

SPECIFICATION 2

recoatable polyurethane/epoxy system for SUPERSTRUCTURE with excellent durability and gloss retention

pretreatment

steel; blast cleaned to ISO-Sa2½, blasting profile 40 - 70 µm or power tool cleaned to ISO-St3

steel with approved shop primer; sweep blasted to SPSS-Ss or power tool cleaned to SPSS-Pt3 or SPSS-Pt2

galvanised steel and aluminium; degreasing with suitable detergent and removal of (zinc)salts by means of mechanical cleaning (e.g. by brushing with nylon brushes) followed by freshwater washing, drying and roughening up of the surface

paint system

SigmaPrime 200

100 µm

SigmaCover 456

75 µm

SigmaDur 550

50 µm

note

at temperatures below 5°C, SigmaPrime 200 can be replaced by SigmaPrime 200 LT

maintenance

should preferably be carried out to this specification

both SigmaCover 456 and SigmaDur 550 have good overcoating and good curing characteristics also below 0°C, which simplifies maintenance

For maintenance on board SigmaDur One can also be used as the final finish coat.

pretreatment

in case of hydrojetted to VIS WJ2/3 L or ISO Wa 2½ L SigmaCover 280 should be applied as first coat at a dft of 50 µm (for more info see sheet 1498)

SYSTEMS FOR SUPERSTRUCTURE AND DECK FITTINGS

3104

February 2011

SPECIFICATION 3

alkyd system for SUPERSTRUCTURE and DECK FITTINGS

pretreatment

steel; blast cleaned to ISO-Sa2½, blasting profile 40 - 70 µm or power tool cleaned to ISO-St3

steel with approved shop primer; sweep blasted to SPSS-Ss or power tool cleaned to SPSS-Pt3 or SPSS-Pt2

galvanised steel and aluminium; degreasing with suitable detergent and removal of (zinc)salts by means of mechanical cleaning (e.g. by brushing with nylon brushes) followed by fresh water washing, drying and roughening up of the surface

paint system

Sigmarine 28	75 µm
Sigmarine 48	35 µm
Sigmarine 48	35 µm

notes

- for galvanised steel and aluminium substrates, Sigmarine 28 should be replaced by SigmaCover 280 (dft of 75 µm)
- one coat of Sigmarine 28 can be replaced by 2 coats of Sigmarine 24 at a dft of 35 µm each

maintenance

should preferably be carried out to this specification
For an upgrade of the finish performance during on board maintenance SigmaDur One can be used as a final coat.

SPECIFICATION 4

chlorinated rubber/modified acrylic system for SUPERSTRUCTURE and DECK FITTINGS

pretreatment

steel; blast cleaned to ISO-Sa2½, blasting profile 40 - 70 µm or power tool cleaned to ISO-Pt3

steel with approved shop primer; sweep blasted to SPSS-Ss or power tool cleaned to SPSS-Pt3

paint system

Sigma Vikote 18	75 µm
Sigma Vikote 46	75 µm
Sigma Vikote 56	35 µm

note

for galvanised steel and aluminium substrates Sigma Vikote 18 must be replaced by SigmaCover 280 (dft of 75 µm)

maintenance

should preferably be carried out with Sigmarine 28 as first coat (dft of 75 µm) or to this specification
Sigma Vikote 46 and 56 have good overcoating and good drying characteristics also below 0°C, which simplifies maintenance

SYSTEMS FOR SUPERSTRUCTURE AND DECK FITTINGS

3104

February 2011

SPECIFICATION 5	water based acrylic coating system for SUPERSTRUCTURE and DECK FITTINGS	
pretreatment	steel without mill scale; blast cleaned to ISO-Sa2½, blasting profile 40 - 70 µm or power tool cleaned to ISO-St3 steel with approved shop primer; sweep blasted to SPSS-Ss or power tool cleaned to SPSS-Pt2	
paint system	Sigma AquaCover 25	50 µm
	Sigma AquaCover 25	50 µm
	Sigma AquaCover 45	50 µm
maintenance	should preferably be carried out to this specification	

MAINTENANCE

The system to be used for maintenance will depend on the size of repair, possibilities of surface preparation and the weather conditions.

The removal of oil, grease and contamination can be achieved by high pressure water cleaning in combination with the use of suitable detergents. This should be followed by a thorough fresh water wash and drying before blast cleaning and/or repainting.

For major areas of breakdown maintenance is normally carried out by a fresh water wash and reblasting to ISO-Sa2½ and recoating with the original system. Minor areas can be power tool cleaned to SPSS-Pt3.

When blast cleaning (dry or wet) is impossible or not tolerated the surface should be derusted by means of power tool cleaning to a minimum of SPSS-Pt2 and primed with SigmaCover 280 (dft of 50 µm) followed by the build coat and top coat as described in the specification.

SYSTEMS FOR SUPERSTRUCTURE AND DECK FITTINGS

3104

February 2011

REFERENCES

Sigma AquaCover 25	see product data sheet 7150
Sigma AquaCover 45	see product data sheet 7250
Sigma Vikote 18	see product data sheet 7318
Sigma Vikote 46	see product data sheet 7350
Sigma Vikote 56	see product data sheet 7355
SigmaCover 280	see product data sheet 7417
SigmaCover 456	see product data sheet 7466
SigmaDur One	see product data sheet 7533
SigmaDur 550	see product data sheet 7537
SigmaPrime 200	see product data sheet 7416
SigmaPrime 200 LT	see product data sheet 7931
SigmaPrime 700	see product data sheet 7930
SigmaPrime 700 LT	see product data sheet 7946
Sigmarine 24	see product data sheet 7135
Sigmarine 28	see product data sheet 7117
Sigmarine 48	see product data sheet 7238
Cleaning of steel and removal of rust	see information sheet 1490
Hydrojetting	see information sheet 1498

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