Base Load Power Hub (BLPH)

Painting Procedure

Navigation aid system

Document Number: 1724000775-MAT-PRO-00012

Document Class: 2

2	05/08/2024	Accepted for Construction (IFR)	M.G.	A.B.	R.M
1	03/07/2024	Issue for Review (IFR)	M.G.	A.B.	R.M
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Rev.	Date	Description	Prepared	Reviewed	Approved

sice S.R.L.

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Revision / Change Log

Rev.	Description
0	Issue for Review (IFR)
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2	Accepted for Construction (AFC)

HOLDS LIST

No.	Description
1	
2	
3	
4	

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SECT. 1 - COVER
(COPERTINA)

Customer / *Cliente*: **ROSETTI MARINO S.P.A. RAVENNA**

Purchase order / *Numero di ordine*: **1724000775**

Dated / *Del*: **12/04/2024**

Plant / *Impianto*: **NAVIGATION AIDS SYSTEM**

Site / *Località*: **BLPH**

Job code / *Commessa*: **JB-2416/C**

Q.C. MANAGER: **R. MORBIDELLI**

CUSTOMER APPROVAL:

ATEX NOTIFIED

Rev.	Motivo /Description	Data/Date
00	ISSUED FOR APPROVAL	17/05/2024
01	ISSUED FOR APPROVAL	03/07/2024
02	FINAL ISSUE	05/08/2024

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SECT. 2 - INDEX
(INDICE)

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2	INDEX *(INDICE)*	4
3	DESCRIPTION AND ITEM LIST *(DESCRIZIONE)*	5
4	APPARATUS PAINTING PROCEDURE AND DATA SHEET *(PROCEDURA DI VERNICIATURA APPARATI)* *4.1 PAINTING PROCEDURE FOR NAVAIDS CONTROL PANEL, BATTERY ISOLATOR BREAKER, STATUS LIGHTS, MARINE LIGHTS OBSTRUCTION LIGHTS AND PHOTOCELL SYSTEM*	6÷10

REMARKS / *NOTE*

SECT. 3 - DESCRIPTION

(DESCRIZIONE)

This document is issued when the job needs the Customer approval for other documents, important for the manufacturing and the test, for example:

- SICE painting procedures
- Sub-suppliers painting procedures

Questo documento viene emesso quando la commessa richiede l'approvazione da parte del Cliente di altri documenti, importanti per la costruzione ed il collaudo, ad esempio:

- *Procedure di verniciatura della SICE*
- *Procedure di verniciatura dei sub-fornitori.*

All the applicable documents to be approved, are hereby attached.

Tutti i documenti applicabili da approvare, sono qui allegati.

ITEM	ITEM DESCRIPTION MAIN REF. P.O. 1724000775 REV.0 DATED 12/04/2024	QUANTITY	REF. NO. (TAG NAME)
10	NAVAID CENTRAL CONTROL PANEL & BATTERY CHARGER	1	NC-200F2/BC-200F2A/B
20	BATTERY ISOLATOR BREAKER	1	CB-200F2
30	BATTERY BANK AND TEMPERATURE PROBE	1	BA-200F2 – ETM-200-01
40	MAIN MARINE YELLOW LIGHTS	2	EML-200-01/02
50	PHOTOCELL SYSTEM	1	EPH-200-01
60	VISIBILITY DETECTOR	1	EVM-200-01
70	OBSTRUCTION LIGHTS	4	EOL-200-01/02/03/04
80	BOAT LANDING STATUS LIGHTS	1	ESL-200-01
90	SPARE PARTS	1 SET	
100	2 YEARS SPARE PARTS	1 SET	

SECT 4: APPARATUS PAINTING PROCEDURE

Sect. 4.1 – PROCEDURE FOR:Navaid control panel, status & obstr. lights, battery breaker, marine lights and photocell system

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

C5 CYCLE for JB n° 2416/C Project Name: BLPM

1. SCOPE

The following specification define the several phases of the C5 painting cycle, with the respective reference parameters, realized in Technor Italsmea.

C5M painting cycle is suitable for off-Shore:

- External environment: Industrial areas with high humidity and aggressive atmospheres and coastal areas with high salinity
- Internal environment: Buildings or areas with almost permanent condensation and high pollution

The Reference standard is UNI EN ISO 12944-1:2018.

LIST OF NORMATIVE APPLICABLE:

- **ISO 8501-2020** Preparation of Steel Substrates before Application of Paints and Related Products – Visual Assessment of Surface Cleanliness (all current parts)
- **ISO 8502-3 -2017** Preparation of Steel Substrates before Application of Paint and Related Products - Tests for the Assessment of Surface Cleanliness - Part 3: Assessment of Dust on Steel Surfaces Prepared for Painting (Pressure-Sensitive Tape Method)
- **ISO 8502-6 – 2020** Preparation of Steel Substrates before Application of Paints and Related Products - Tests for the Assessment of Surface Cleanliness - Part 6: Extraction of Soluble Contaminants for Analysis – The Bresle Method
- **ISO 8502-9 - 2020** Preparation of Steel Substrates before Application of Paints and Related Products - Tests for the Assessment of Surface Cleanliness - Part 9: Field Method for the Conductometric Determination of Water-Soluble Salts
- **ISO 8503 - 2017** Preparation of Steel Substrates before Application of Paints and Related Products - SurfaceRoughness Characteristics of Blast-Cleaned Steel Substrates (all current parts)
- **ISO 11124 -2019** Preparation of steel substrates before application of paints and related products — Specifications for metallic blast-cleaning abrasives
- **ISO 11125 - 2018** Preparation of steel substrates before application of paints and related products — Test methods for metallic blast-cleaning abrasives

2. RANGE OF APPLICATION

This specification is applied to Field Lighting Panels, Motor Control Panels, Lighting Fixtures made of copper free aluminium and stainless steel.

3. OPERATING MODE

3.1 Pre Cleaning

All surfaces shall be checked for defects, such as, but not limited to "scabs", weld spatters, sharp edges, sharp corners, cavities, laminations, weld slag, etc. These defects shall be repaired and "dressed" smooth providing a relatively smooth surface before blasting commences.

3.2 Surface Preparation

In case components have not been sand-blasted after moulding, they shall be abrasive blast cleaned to achieve Sa 2.5 standard as per ISO 8501-1:2007.

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The range of the blasting profile is: 25 to 35 microns.

Protect the joints and the threading by using adhesive tape, plastic plug or cartoon.

3.3 Material washing

Components shall be thoroughly washed using dedicated washing machine.
Check that concentration of phosphodegreasing agent inside washing machine is within prescribed limit (between 1% and 1.5%).

Proceed with components washing at 70°C and with a washing cycle of about 15 minutes.

3.4 Coating Application

Painting room is closed, conditioned and kept with a weak depression to prevent spills of vapors. Due to this, painting room is always kept above dew point temperature.

Application will be by Air Spray

Our standard process is described below, in case there are different requests, they must be specified into the order.

FOR ALL MATERIALS EXCEPT STAINLESS STEEL:

- The Primer (EPOXYPOLYAMMIDIC PRIMER WH) shall be applied within 3 hours of completion of material washing, to achieve a Dry Film Thickness of 60 microns.
- The Finish Coat (POLISIR – polyurethane coat) shall be applied to achieve a Dry Film Thickness of 80 microns. Color is according to customer specification.

Overall Total Dry Film Thickness shall be 140 microns average minimum.

The over-coating intervals shall comply with the paint coating manufacturer's details, located on the relevant Technical Data Sheets.

3.5 Internal Anti-condensate painting

The standard cycle includes the application of the anti-condensate only for some products. Verify if requested on the technical file. Where required, anti-condensate replace internal coating.

4. HANDLING OF COMPONENTS

Care shall be exercised when handling finish-coated components to ensure minimum damage to applied coatings.

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5. REPAIRS TO DAMAGED PAINT COATINGS

When the coatings are damaged, but the substrate is exposed, these damaged areas shall be hand-tool/power-tool cleaned to St 3 standard as per ISO 8501-1:2007, "feathering" the edges to existing surrounding coatings.

If the substrate is not exposed by the damage, then lightly abrade the damaged areas and adjacent coatings to achieve a "key" and apply the requisite number of coats of paint to achieve the original coating system and thickness.

Apply the requisite number of coats of paint to achieve the original coating system and thickness on all repairs.

6. QUALITY CONTROL

All quality checks will be carried out as per internal quality procedure.

ROUTINE TEST:

- Visual inspection at the end of the process → 100% according to our internal procedure (PRD-IO-02)
- Bath Solution check
- Steel preparation check, roughness
- Control of the degree cleaning
- Control of environmental parameters
- DFT on First Coat check (Dry and Wet), to verify the homogeneity of paint (5 thick measures in different position) to guarantee minimum value required. Sampling percentage in accordance with our internal procedure.

Destructive tests can be performed only on request.

STANDARD VALUES FOR TESTING:

- ***ADHESION TEST – PULL OFF TEST*** → *Test in compliance with ISO4624 using Hydraulic tester, all values are > 5Mpa (only on requested)*
- ***CONTROL OF DUST CONTAMINATION*** → *Dust surface check, carried out in compliance with ISO 8502-3 Class 2 (frequency - once a day)*
- ***CONTROL OF SALT CONTAMINATION*** → *Using Bresle test, checked salt contamination in according to ISO 8502-6 & 9, Standard value 20mg/m2. (only on request. According to our standard procedure we control each day PH of washing water)*
- ***BLOTTER TEST -*** → *If request can be done Before staring work, was controlled that no oil or water presented in compressed air*

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PRIMER DATA SHEET

TECHNICAL DATA SHEET

FONDO EPOSSIPOLIAMMIDICO WH AD ALTA RESISTENZA

SIRCOLOR
PITTURE E VERNICI SPECIALI

GENERAL CHARACTERISTICS

High-resistance, water-based filling primer coating.
Water-based epoxy primer with polyamide modification suitable for the anti-corrosive protection of iron and steel structures, as well as suitable for insulation and adhesion on difficult substrates such as light alloys, special steels and other non-ferrous materials. The particular modification of resins that compose this product give the dried film high mechanical strength with strong qualities of flexibility that make it a coating with exceptional resistance to shock.
The aforementioned properties make the FONDO EPOSSIPOLIAMMIDICO WH very resistant to crushed stone (high anti-stone properties according to automotive and industrial vehicle standards).
The active pigments that make the FONDO EPOSSIPOLIAMMIDICO WH highly protective against corrosion are lamellar mica and zinc phosphate.

COLORS

White - gray - ivory (other colors on request)

SURFACE PREPARATION

The product can be applied directly on degreased glossy sheet metal, preferably brushed or phosphated.
The best characteristics of adhesion and resistance to shocks and corrosion are obtained on even slightly sandblasted substrates

PRODUCT SUPPLY CHARACTERISTICS

Cod.	met.	range
Sirc.1.05	Vix Brookfield (mPas)	5000 - 5500
Sirc. 2.05	spec.weight(g/ml)	1.690 – 1.730

HARDENER SUPPLY CHARACTERISTICS

HARD. TIPO 1 PER FONDO EPOSSIPOLIAM. WH cod.1768….:

Cod.	met.	range
Sirc. 2.05	spec.weight(g/ml)	1.040 – 1.060

APPLICATION PROCEDURE

The product can be applied by airless spray, mixed air, brush or roller.
It can be applied at high thicknesses without compromising the mechanical characteristics of the dried film and without complicating spraying operations.
Given the particular drying speed, we recommend the use of an automatic 2K mixer.
Thickness obtainable with one pass: 60 - 90 dry microns
Thickness obtainable with two passes: 120-150 dry microns

CATALYSIS MODE

To apply the product mix part A as is and part B in the following proportions:

Catalysis in weight

quantity	code	description
100	1632	FONDO EPOSSIPOLIAM. WH
15	1768	CATALIZ. TIPO 1 PER FONDO EPOSSIPOLIAM.WH

Catalysisi in volume

quantity	code	description
100	1632	FONDO EPOSSIPOLIAM. WH
24	1768	CATALIZ. TIPO 1 PER FONDO EPOSSIPOLIAM.WH

Attention: join the hardener (part B) to the FONDO EPOSSIPOLIAMMIDICO WH (part A) by energetic and long mixing with a mechanical stirrer.

THINNING

Thinning the product with water.
The dilution percentage must be defined in relation to the spraying system

TECHNOLOGICAL FEATURES AND RESISTANCE TESTS

DRYING 20°

Out of dust:	10-15'
touch:	1-2 hours
depth:	8 - 10 hours

OVERCOATING
The product can be overpainted immediately after its application (painting temperature between 18 and 20 °C) giving the possibility to carry out, without problems to the final appearance, a wet on wet cycle

NOTES FOR THE USER

The content of this technical data sheet is the result of checks and analyses of laboratory reliable, but not exhaustive.
The aforementioned data are valid on the revision date of this technical data sheet; it is therefore responsibility of the user verify data and methods of use based on own application needs.
The user also has the responsibility to operate in accordance with the current regulation on health and safety at work.
The manufacturer doesn't assume responsibility concerning any damages resulting from improper use of the product by the user, or deriving from a use that is not compatible with the nature of the product itself.

SIRCOLOR SRL Sistema di Gestione Qualità Certificato UNI EN ISO 9001:2000 n. 2451 da CERTIQUALITY
Reg. Batasiolo, 86 - 12064 La Morra - CN - Italy – Tel. +39 017350735 - Fax +39 0173509298 P.IVA 02248860047 www.sircolor.com sircolor@sircolor.com

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FINAL COAT DATA SHEET

TECHNICAL DATA SHEET
POLISIR WH

SIRCOLOR PITTURE E VERNICI SPECIALI

GENERAL CHARACTERISTICS
Two-component polyurethane water-based enamel. High gloss and color resistance. Excellent retention of brilliance over time (for the glossy version). Excellent resistance to chemical aggression.
Excellent resistance to abrasion. Good mechanical properties - impact resistance. The product is suitable to be applied on plastic material after adhesion test.

COLORS
RAL and industrial colors, colors on request

PRODUCT SUPPLY CHARACTERISTICS

Cod.	Met.	range
Sirc.1.01	Vix C.F.4 20°C(sec)	80 – 100
Sirc. 2.05	spec.weight(g/ml)	1.000 – 1.300
		depending on the colors

HARDENERS SUPPLY CHARACTERISTICS

HARD. PER POLISIR WH TIPO 1 cod. 1751….:

Cod.	met.	range
Sirc.1.01	Vix C.F.4 20°C(sec)	17 - 21
Sirc. 2.05	spec.weight(g/ml)	1.050 – 1.080

HARD. PER POLISIR WH TIPO 2 cod. 1756….:

Cod.	Met.	range
Sirc.1.01	Vix C.F.4 20°C(sec)	12 - 16
Sirc. 2.05	spec.weight(g/ml)	1.080 – 1.110

HARD. POLIURET.WH UNIVERSAL cod.1665….:

Cod.	met.	range
Sirc.1.01	Vix C.F.4 20°C(sec)	19 – 23
Sirc. 2.05	spec.weight(g/ml)	1.090 – 1.120

HANDLING AND STORAGE
The product, stored in a sealed package and at temperatures not lower than 10 °C, has a shelf life of 6 months from the delivery date

APPLICATION PROCEDURE
Do not apply the product at temperatures below 10 °C
Pot Life (catalyzed useful life): 6 hours maximum at 20 °C (It is recommended to stay below the maximum time)
Maximum thickness applicable: 60 - 70 dry microns

CATALISYS MODE
To apply the product mix part A as is and part B in the following proportions

Catalysis in weight

quantity	code	description
100	1674	POLISIR WH LUCIDO
	1677	POLISIR WH OPACO
	3192	POLISIR WH SEMILUC.
25	1751	HARDENER TIPO 1
	1756	HARDENENR TIPO 2
20	1665	HARDENER UNIVERSAL

Catalysis in volume

quantity	code	description
100	1674	POLISIR WH LUCIDO
	1677	POLISIR WH OPACO
	3192	POLISIR WH SEMILUC.
25	1751	HARDENER TIPO 1
	1756	HARDENER TIPO 2
20	1665	HARDENER UNIVERSAL

Attention: join the hardener (part B) to the POLISIR WH (part A) by energetic and long mixing with a mechanical stirrer.

THINNING
Thinning the product with water.
Recommended dilution: 6% - 10% by weight

TECHNOLOGICAL FEATURES AND RESISTANCE TESTS

DRYIING 20°		
Out of dust:		40 – 60'
handleable:		3 – 4 ore
hard:		6 – 8 ore
depth	:	12 - 24 ore
DRYING 60°		
hard:		20 – 30'

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