## Compliance with the

MARINE COATINGS

## International Marine Regulations





**GSPC** Heavy Industrial & Marine Coatings

## Under IMO, ABS, Solas, Marpol, MarED, ISO, PSPC, Navsea and IACS Regulations

## International Marine Regulators

The Organizations below are responsible for the management and control of the international marine regulations for the Marine coatings industry.



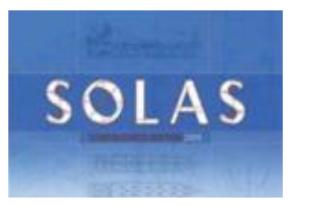
International maritime organization (IMO): Specialize agency of the United nations Responsible for measures to improve the safety and security of international shipping and to prevent maritime pollution from ships. Group of 167 countries that sign treaties regarding building, operation and maintenance of sea-going vessels.



America bureau of shipping (ABS): member of the international association of classification societies (IACS). It's the third largest classification society in the world based on gross tonnage, ABS currently leads the market on new building orders. Its classed fleet comprises more than 11,000 vessels of various types, aggregating in excess of 175m gross tons.



International Organization for Standardization (ISO): responsible for the ISO 9000, ISO 14000, ISO 27000, ISO 22000 and other international management standards. There is a great deal of similarity between the SSPC, BS(British Standard) and ISO cleaning standards. ISO 9501-1-1998: St, Sa, F1. and marine standards: Sa3, Sa2 ½, Sa2, St3, St2.



International Convention for the Safety of Life at Sea (SOLAS): The main objective is to specify minimum standards for the construction, equipment and operation of ships, compatible with their safety. Flag States are responsible for ensuring that ships under their flag comply with its requirements.

International association of classification societies (IACS): Dedicated to safe ships and clean seas,



OF CLASSIFICATION SOCIETIES

IACS makes a unique contribution to maritime safety and regulation through technical support, compliance verification and research and development. IACS consists of 13 member societies.



The Society for Protective Coatings (SSPC): The Society for Protective Coatings was founded in 1950 as the Steel Structures Painting Council, a non-profit professional society concerned with the use of coatings to protect industrial steel structures. In 1997, the name of the association was changed to The Society for Protective Coatings



Naval Sea system Command (NAVSEA): is comprised of command staff, headquarters directorates, affiliated Program Executive Offices (PEOs) and numerous field activities. Together, we engineer, build, buy and maintain ships, submarines and combat systems that meet the Fleet's current and future operational requirements.



The **Lloyd's Register Group** is a maritime classification society and independent risk management organization providing risk assessment and mitigation services and management

#### systems certification..

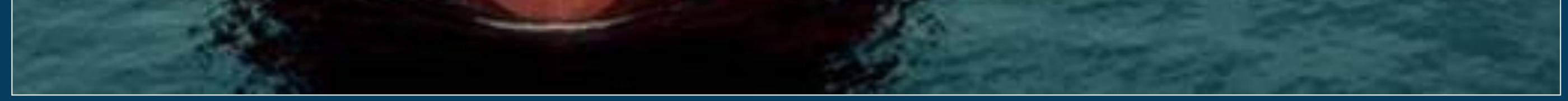
SWEDISH STANDARDS INSTITUTE Swedish Standards Institute (SIS): is a member-based, non-profit association specialized in national and international standards. The market leader in standards in Sweden, SIS is recognized for its professionalism, expertise and openness in relation to customers, employees, suppliers and partners



NACE International (NACE): is involved in every industry and area of corrosion prevention and control, from chemical processing and water systems, to transportation and infrastructure protection. NACE's main focus of activities includes cathodic protection, coatings for industry and material selection for specific chemical resistance.

The logos showed up there belong to their owners, and they have all the rights on them. We used them for information purpose only





# With a passion for performance, compliance of the Regulations and a well trained technical support staff, we deliver advanced marine coatings technologies

that keep the global shipping fleet protected for a lifetime at sea

GSPC heavy Industrial & Marine Coatings

## **GSPC Heavy Industrial** & Marine Coatings



### Advanced Technology

GSPC is the advanced technology, part of Anticorrosivos y Acabados AYA - Pinturas AYA, one of the leading Industrial & Marine Coatings Companies, and one of the Region largest Performance Coatings Manufacturer. Our Marine Coatings products lines are engineered to deliver proven performance in service whilst representing value for money. Environmental responsibility is a major feature of our Marine Coatings offer; particularly in terms of new product introductions and ongoing global research programmers. We are one of the technology leaders in IMO compliance Antifouling, Abrasion resistant coatings, IMO compliance Ballast tank coatings and advanced technology of foul release coatings for ships being built, repaired or maintained, following the ABS guide for the class notation in Coatings performance standards (CPS). With several manufacturing plants, sales operations in 10 countries and over 500 pick up points , we are one of the most reliable Marine Coatings supplier in the Region.

Leagues ahead on compliance

We have established a dedicated team of IMO PSPC Experts to



guide the customers through the IMO PSPC regulations. As a Marine Coatings Manufacturer, we have compliance to the Lloyds Register IMO PSPC Type Approval Certification ('TAC') for water ballast tanks, proven to remain in "good" condition for 15 years, we are well placed to guide you through IMO PSPC for crude oil tanks.

crude oil tanks. We continue to work hard with independent test houses to make sure our coating systems receive 'Type Approval Certification' - helping you to comply. Not only are we working for complete IMO compliance internally, but we continue to work with industry bodies (such as class societies, paint associations, ship owner associations and shipyard associations) in a number of external fora to offer advice and comment for the good of the industry.

## Approved product development and manufacturing facilities

All our manufacturing sites, have compliance to class societies (who are members of the International Association of Classification Societies which is a prerequisite of IACS before they can issue a TAC. We don't stop there – We have manufacturing facilities ISO 9001 accredited, covering product development as well as manufacturing quality.

# International Marine Regulations and Regulators



### **ISO Standards**

-There is a great deal of similarity between the SSPC, BS (British Standard), and ISO cleaning Standards. -Specifiers should be aware of the exact meaning of the standards use due to slight differences in working.

ISO 9501-1-1988 is derived from Swedish SIS 0559900. It is broken down into three grades:

-St: Scraping and wire-brushing by mechanical and manual methods
 -Sa: Blast cleaning
 -F1: Flame cleaning (Not used in marine)

## Typical ISO standard used in the Marine Industry

Sa3: Blast Cleaning to pure metal
Sa2 ½: Blast cleaning with at least 95% of the surface free of any residues
Sa2: Blast cleaning with at least 2/3 of the surface free of any residue



St3: Very thorough scraping and wire brushing, machine brushing, grinding
St2: Thorough scraping and wire brushing, grinding, etc.

### **International maritime Organization (IMO)**

Specialized agency of the United nations Responsible for stipulating measurements to improve the safety and security of international shipping and to prevent maritime pollution from ships. A Group of 167 countries that sign treaties regarding building, operation and maintenance of sea-going vessels.

### Safety of the Life at Sea (SOLAS)

The international Convention for the Safety of Life at Sea. A part of IMO, directly involved with marine coatings as part of their mission to specify minimum standards for safety.

### **SOLAS Coating Rules**

Prevention of corrosion in structural members and tanks to reduce ship failure an avoid loss of life and spillage of cargo. Fire and smoke rating for interior coatings in living spaces.

### **Other IMO Coatings-Related conventions**

Not use of Ban of tributyl Tin (TBT) effective in 2008 on AFS (Anti Fouling System) Performance Standards for Dedicated Seawater Ballast Tanks in all types of Bulk Carriers as adopted in December 2006





# International Marine Regulations and Regulators



**Performance Standards for Protective Coatings (PSPC)** 

Dedicated seawater ballast tanks in all types of ships (500 gt+) and double sided skin spaces of Bulk

### Carriers (150 m+) New Building and maintenance coatings projects.

### **PSPC Coatings Technical File**

Specification of the coatings system applied to the dedicated seawater ballast tanks and double sided skin spaces.

Record of the shipyard's and ship owner's coatings work. Detailed criteria for coatings selection, job specification, inspection, maintenance and repair.

PSPC coatings Basic System **Requirements** 



Table 1 of the Basic coatings system requirements for cargo oil tanks of crude oil tankers and void spaces in bulk carriers and oil tankers.

This is a complete coatings specification

#### **PSPC Coatings System Approval**

Two tests are required:

- 1.- Simulated ballast tank conditions (time frame 180 days)
- 2.- Condensation chamber (on and after 180 days)

Results are documented and a statement of compliance or type approval certificate is issued if found satisfactory.

#### IMO PSPC Coatings Inspection Requirement

Inspection points and log book requirements (Annex 1 in section 6.2 inspection items) Quality coatings inspectors Compliance to NACE coatings inspector level 2, FROSIO inspector level III, or equivalent as verified by the IMO Administration.

#### **Port State Control**

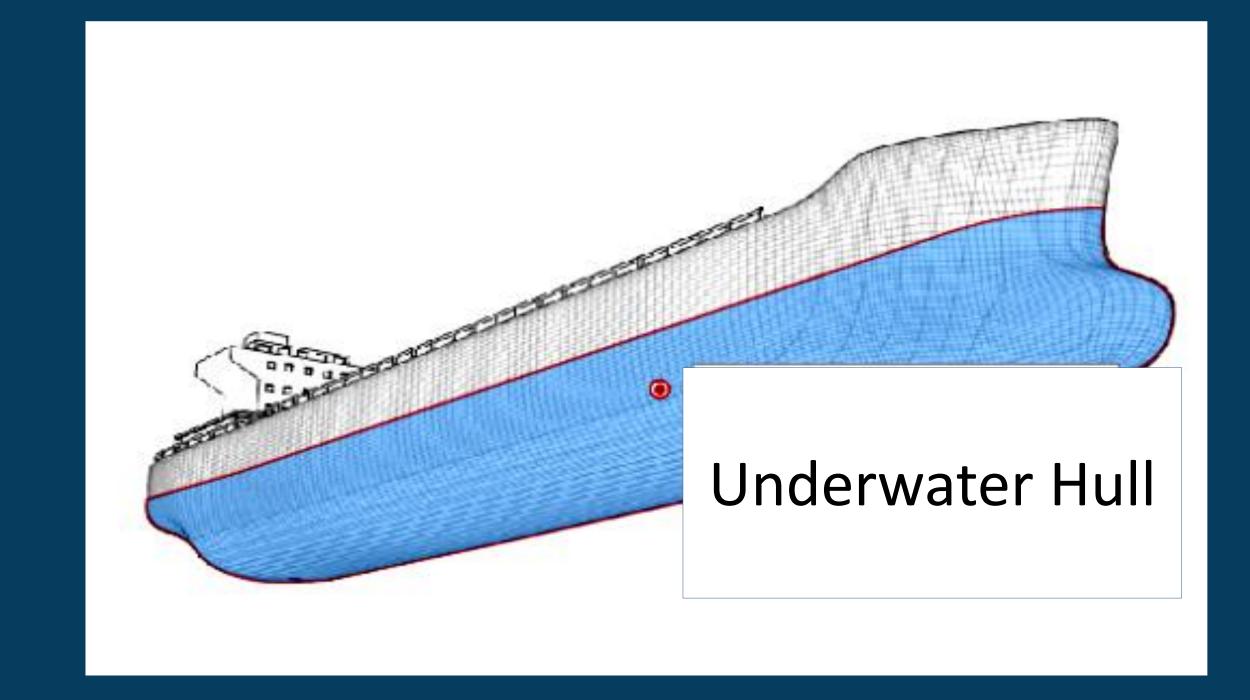
Allows any member country to board and inspect any vessel entering that country Vessel not in compliance with IMO regulations can be held up in the port state until brought into compliance.

## CERTIFIED

## MARINE COATINGS

## Underwater Hull

Underwater Hull (Submerged surfaces from keel to Deep load line receiving antifouling And Antifouling (submerged surfaces from keel to deep load line)



System Reference	Area	Coatings System	Surface Preparation	Specify Dry Film Thickness
UH-1	Underwater Hull	Ayapoxi 83 TL – Surface Tolerant Epoxy Ayapoxi 83 TL – Surface Tolerant Epoxy	SSPC-SP10 Sa 2 ½	125 – 150 mic 5 – 6 mils 125 – 150 mic 5 – 6 mils
UH-2	(submerged surfaces from keel to deep load line	Ayapoxi 70 – High Performance Epoxy Ayapoxi 70 – High Performance Epoxy	SSPC-SP10 Sa 2 ½	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
UH-3	receiving antifouling)	Ayapoxi 68 – High Technology Epoxy Ayapoxi 68 – High Technology Epoxy	SSPC-SP10 Sa 2 ½	125 – 150 mic 5 – 6 mils 125 – 150 mic 5 – 6 mils
UH-4		Ayapoxi 87 TG – Glass flake Epoxy	SSPC-SP10 Sa 2 ½	250 – 300 mic 10 - 12 mils 400 – 500 mic 16 – 20 mils
		If an antifouling tie coat is required for systems UH-1, UH-2, Uh- 3 or UH-4, then apply the following after the second coat		
	Optional Tie Coat:	Ayapoxi 47 TC – Epoxy antifouling Tie Coat	Clean and Dry	50 – 75 mic 2– 3 mils

AF-1 60 Month service life

AF-2 60 Month service life

AF-3 36 Month service life

AF-4 36 Month service life Antifouling (Submerged surfaces from keel top deep loan line)

Ayafouling 56 AP – Self Polishing Antifouling Ayafouling 56 AP – Self Polishing Antifouling Ayafouling 56 AP – Self Polishing Antifouling

Ayafouling 56 AP – Self Polishing Antifouling Ayafouling 56 AP – Self Polishing Antifouling Ayafouling 32 AP – Self Polishing Antifouling

Ayafouling 56 AP – Self Polishing Antifouling Ayafouling 56 AP – Self Polishing Antifouling Ayafouling 56 AP – Self Polishing Antifouling

Ayafouling 32 AP – Self Polishing Antifouling Ayafouling 32 AP – Self Polishing Antifouling Ayafouling 32 AP – Self Polishing Antifouling

quest

**D** 

uodn

available

conformity

of

eclaration

 $\square$ 

rED

Ma

Boot top:	2 x 125 mic	2 x 5 mils
Sides:	2 x 150 mic	2 x 6 mils
Flat bottom:	2 x 125 mic	2 x 5 mils
Boot top:	2 x 125 mic	2 x 5 mils
Sides:	2 x 150 mic	2 x 6 mils
Flat bottom:	2 x 125 mic	2 x 5 mils
Boot top:	2 x 75 mic	2 x 3 mils
Sides:	2 x 88 mic	2 x 3.5 mils
Flat bottom:	2 x 75 mic	2 x 3 mils
Doot top		
Boot top:	2 x 90 mic	2 x 3.6 mils
Sides:	2 x 110 mic	2 x 4.4 mils
Flat bottom:	2 x 90 mic	2 x 3.6 mils





THIS DOCUMENT TO BE RETAINED FOR LEGAL PURPORES

Artistersker i Askadar AN, SA. Alexal, Ain. far Astrophys. Carers, Vin. far Astrophys.

ENCORESIGNATION DECLARATION OF CORPORATIV

land is confinential for MARINE EQUIPAGENT DESCRIPTIONS (MDT)

This is to racitly that is compliance with the Cronall Educative MERSEC of 20 December 1996 on market optiquent, as annaled by Commission Educative MERSEC, 2002/1980, 2002/1980, 2002/1980, 2003/1980 and 2003/2980 of the European Parliament and of the Cronall, and 2017/2019/2019 Recognitive Agreement 2003/2980.

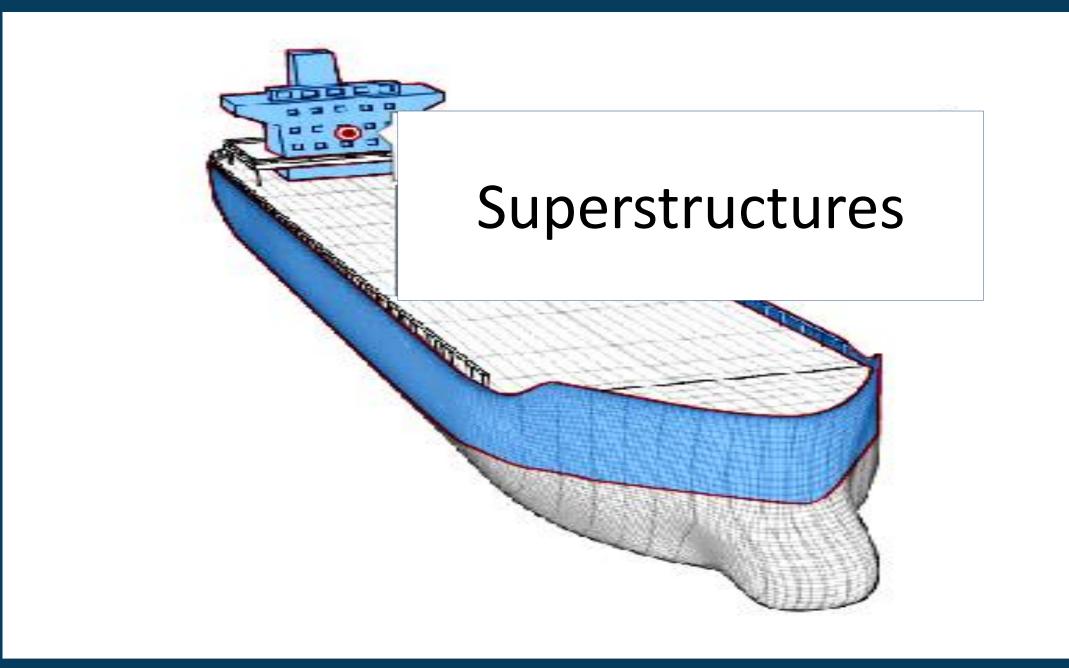
Decision that for product(s) detailed below readium(s) in type as required by for shore Directions as exidence (by the Conformity Rest: Indexe.

EC Type (Sciencistics (Holder 6)) PLUS	Contraction of the	HE0405123	Englisy (\$55603016)	issuelling the GCL under Call Vertice ASSPREEMEN	hip the
er Museu og Caribiae (* Ciri	analy Se	HEARING	Bapley 2010/0011	issuelling the goal or der Gaal Variate Affrender and	Norther 1
400 AmeriA.3	Den Mort	A.19.18x			
	Des Centretors	(1) Paris systems	NO PLOSE CONSTRUCT	SWEHLSWALKE ORAC	1041871-05
USOS CHEGO VINANDAS	Tem Campatoni	104.112 SURVER HALEN AND A CALENCY VIEW (MICHINER)	NE-R.COM.COMPTAN	SMEHISSING OWNER	1041371-05
Kanatatane's Prolati	Complete	ANNESS (CP	PER-BOLPHI PALA	FER 24 WIRE PALA, FER 8	Auri 80
			enternet Enternet	ENT-AG ONY PALA, ENT-4	al Gery Part A,
		A1090040	(PAGE PROPAGA)	P-DEVICE PARA, SP-B PA	• #b
					۲
				SE Gelferation	C 1001-108-109
	Speci			Spel	
- *	Postar Cate	The Hardweige, King The Number Separation	**	Nove Scott Home, B Poster Bostative Press Cale	
GSPC Heavy Industrial & Review Coasting					
A Number Coating					



# Freeboard and External Superstructures

Superstructures from Boot top to rail, bulwarks, Houses, equipment and appurtenances, etc



System Reference	Area	Coatings System	Surface Preparation	Specify Dry Fi	Im Thickness
SS-1	Freeboard and external Superstructure	Ayapoxi 83 TL – Surface Tolerant Epoxy Ayapoxi 83 TL – Surface Tolerant Epoxy and either:	SSPC-SP10 Sa 2 ½	100 – 150 mic 100 – 150 mic	4 – 6 mils 4 – 6 mils
	s (Boot top to	Ayapoxi 45 EA – Acrylic Epoxy Coating or:		50–75 mic	2– 3 mils
	rail, bulwarks, Houses,	Ayakron 66 HS – Aliphatic Polyurethane or:		50–75 mic	2– 3 mils
	equipment	Ayasilox 55 PX – Acrylic Polisiloxane		50 – 75 mic	2–3 mils
	and			250–375 mic	10 - 15 mils
SS-2	appurtenance s, etc.	Ayapoxi 70 – High Performance Epoxy Ayapoxi 70 – High Performance Epoxy and either:	SSPC-SP10 Sa 2 ½	125 – 150 mic 125 – 150 mic	5 – 6 mils 5 – 6 mils
		Ayapoxi 45 EA – Acrylic Epoxy Coating or:		50–75 mic	2– 3 mils
		Ayakron 66 HS – Aliphatic Polyurethane		50 – 75 mic	2–3 mils
SS-3		Ayapoxi 68 – High Technology Epoxy		250 – 325 mic	10 - 13 mils
33-3		Ayapoxi 68 – High Technology Epoxy and either:	SSPC-SP10 Sa 2 ½	125 – 150 mic 125 – 150 mic	5 – 6 mils 5 – 6 mils
		Ayapoxi 45 EA – Acrylic Epoxy Coating or:		50–75 mic	2– 3 mils
		Ayakron 66 HS – Aliphatic Polyurethane		50 – 75 mic	2–3 mils
SS-4		Ayazinc 70 Z– Zinc Rich Epoxy Primer Ayapoxi 83 TL – Surface Tolerant Epoxy Ayasilox 90 PX – Epoxy Polisiloxane	SSPC-SP10 Sa 2 ½	250 – 325 mic 75 – 100 mic Stripe 125 - 150 mic	10 - 13 mils 3 – 4 mils Stripe 5 – 6 mils
				200–250 mic	8 - 10 mils
SS-5		Ayapoxi 83 TL – Surface Tolerant Epoxy Ayasilox 90 PX – Epoxy Polisiloxane	SSPC-SP10 Sa 2 ½	100 – 150 mic 125 - 150 mic	4–6 mils 5–6 mils
				225 – 300 mic	9 - 12 mils





#### THIS DOCUMENT TO BE RETAINED FOR LEGAL PURPOSES.

guest

re

uodn

available

conformity

of

Declaration

MarED

Artisterscher p Andrafes Affe, 1.A. Abreck, Affe. Tel Artistekter Caress, Vin. Tel Artistekter Service State 1.0 and Artistekter

#### ENCORES CONSIDER DECLARATION OF CORPORATIV

#### land is sendered if its MARINE SQUEMONT DESCRIPTIONS

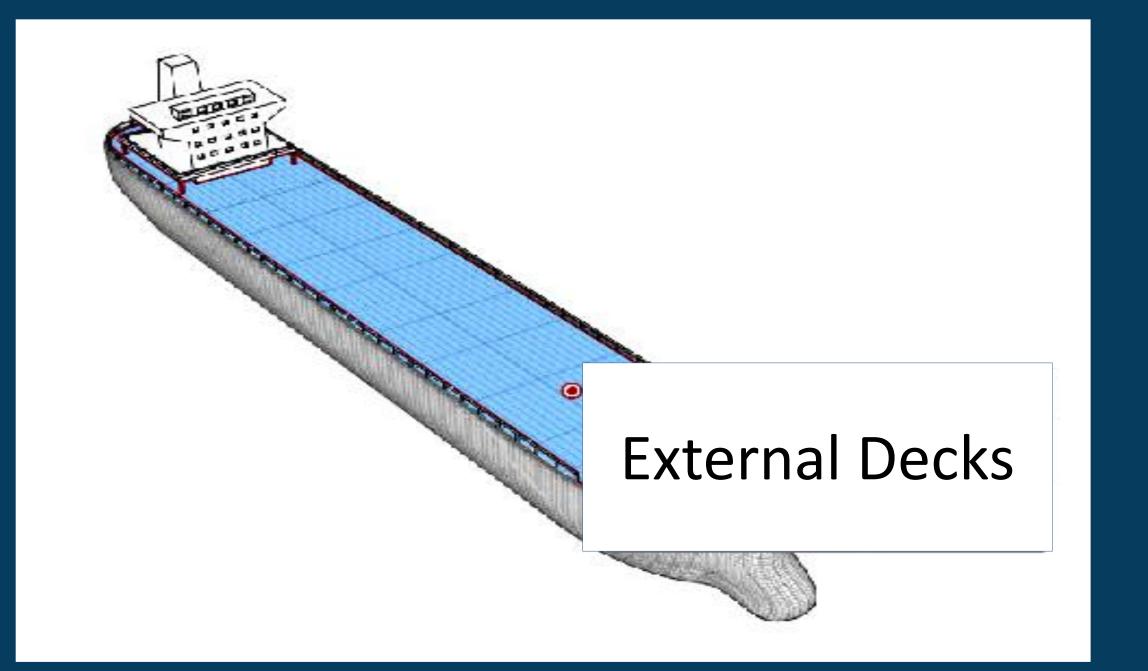
This is in manify that is compliance with the Creasel Directive 90008000 of 20 December 1996 on marine applyment, as anomale by Commission Directive 9000802, 2000033002, 200073080, 200080280, 200890280 and 200909880 of the December Performant and of the Creasel, an #20-501346000 Recognitive Approximat 200942080.

E: Type (Second to physic) many	<ul> <li>Contraction</li> </ul>	HERODOXIZE B	uno resevonte	issuedity Verile Al	The QCL of the California Distance of the
PLUS ES PLUS OF CHILLER (P	Contractly Se	HEXCENTRAL B	uny 20120011	istanting Victoria	Tergija under Geskierste Distanter
160 AmeriA.5	Dens Maria	A19.89			
	Ben Gerigretoni	OB Party systems	ora, contraction	GS WITH 12	WHICH CONTRACTORISTICS
USDE CWEERY RUNDER	Ben Gergreton	NALTO SURVENIENCESCON (WISHINGTON)	DIRLOCK CONDIN	SS WEITH 12	AVALUED CONNECTION STOCK
Nandadare's Projett	Cesarge an	ANADOL OF P	CP-808 Peer A	ann ann	AND PARA, FER & Review
		ANANOG ME B	H 1808 Per Anta N 18 Per Ils	(BHT-441)	Ony Park, EXT-441 Ony Park,
		2009D0340 (8	PAGE PHILPHEA.	er-20030	10104.67-070483
					۲
	Speci			Speci	
	Franker Gebe	See Hastengro, Meding Thereica Separating	•	Nume Numer Geogra	Sec. 1 August Balling Excernative President
OSPC					



## **External Decks**

Weather decks, passageways, vehicular traffic, ramps, etc



System Reference	Area	Coatings System	Surface Preparation	Specify Dry Fi	Im Thickne
ED-1	External Decks (weather	Ayapoxi 83 TL – Surface Tolerant Epoxy Ayapoxi 83 TL – Surface Tolerant Epoxy Optional:	SSPC-SP10 Sa 2 ½	100 – 150 mic 100 – 150 mic	4 – 6 mils 4 – 6 mils
	decks, passageways,	Ayapoxi 45 EA – Acrylic Epoxy Coating or:		50–75 mic	2– 3 mils
	vehicular	Ayakron 66 HS – Aliphatic Polyurethane		50 – 75 mic	2– 3 mils
ED-2	traffic, ramps, etc.)	Ayapoxi 68 — High Technology Epoxy Ayapoxi 68 — High Technology Epoxy Optional:	SSPC-SP10 Sa 2 ½	250 – 375 mic 125 – 150 mic 125 – 150 mic	10 - 15 mils 5 – 6 mils 5 – 6 mils
		Ayapoxi 45 EA – Acrylic Epoxy Coating		50–75 mic	2– 3 mils
		or: Ayakron 66 HS – Aliphatic Polyurethane		50–75 mic	2– 3 mils
				250 – 325 mic	10 - 13 mils
ED-3		Ayapoxi 70 – High Performance Epoxy Ayapoxi 70 – High Performance Epoxy Optional:	SSPC-SP10 Sa 2 ½	125 – 150 mic 125 – 150 mic	5 – 6 mils 5 – 6 mils
		Ayapoxi 45 EA – Acrylic Epoxy Coating		50–75 mic	2– 3 mils
		or: Ayakron 66 HS – Aliphatic Polyurethane		50 – 75 mic	2– 3 mils
		Ayazinc 70 Z– Zinc Rich Epoxy Primer		250 – 325 mic	10 - 13 mils
ED-4		Ayapoxi 70 – High Performance Epoxy Optional:	SSPC-SP10 Sa 2 ½	75 – 100 mic 125 – 150 mic	3 –4 mils 5 – 6 mils
		Ayapoxi 45 EA – Acrylic Epoxy Coating		50–75 mic	2– 3 mils
		or: Ayakron 66 HS – Aliphatic Polyurethane		50 – 75 mic	2– 3 mils
ED-5		Ayapoxi 87 TG – Glass flake Epoxy	SSPC-SP10 Sa 2 ½	250 – 325 mic 400 – 500 mic	10 - 13 mils 16 –20 mils
ED-6		Ayalkyd 60 PA – Alkyd Primer Ayalkyd 60 PA – Alkyd Primer	SSPC-SP10 Sa 2 ½	75 – 100 mic 75 – 100 mic 50 – 75 mic	3–4 mils 3–4 mils 2– 3 mils
		Ayalkyd 45 – Alkyd Top Coat			2– 5 mils 10 - 13 mils
	Note:	Ayalkyd 60 PA – Alkyd Primer	Sa 2 1/2	50 – 75 mic 250 – 325 mic	2







THE DOCUMENT TO BE RETAINED FOR LEGAL PURPOSES

available

conformity

of

Declaration

MarED

Antiserration y Andreafter ANII, S.A. Alexandration International Contract View International and a set of the second distance of the

ENDOFENSIONAL DECLARATION OF CONFORMERY

land is a subservit Ga MARPE SQUEMONT DESCRIPT (ADD)

This is in untily that is compliance with the Council Educative 1988/88/C of 28 December 1998 on market replyment, as another by Councileties Educative (MARASIC, 2002/1888), 2002/1889), 2002/1889), 2002/1999 and 2002/2889) of the European Packassest and of the

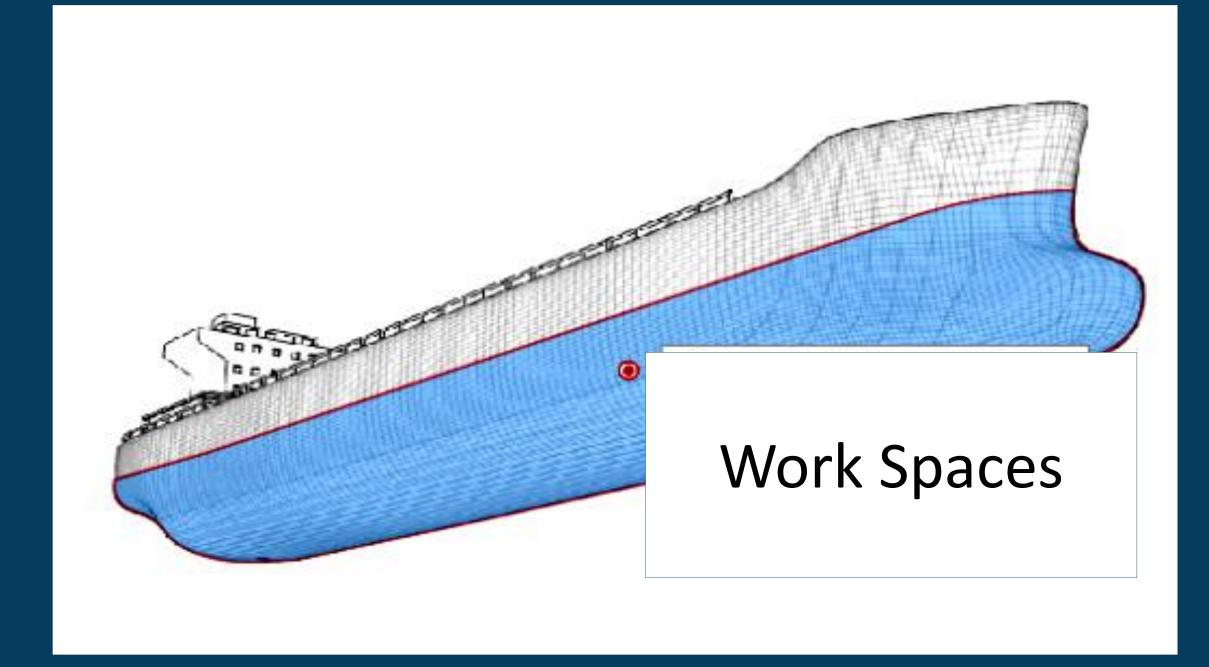
Cruest, and S7-73 Second Recognition Agreement 305482990

	ET Tige (handradian photos b) Gerthadian his			Englisy 1952		Re-GOLunde Gestionte Shuedore
PLUS SC PLUS	and contract of the	nimely Se	HEXES 120	English 2010		Fergüs under Gestrichte
1980	4000 (A.S.	Dens Maria	A-193.589			
		lien Gergen	dis freiningen		SHOW SO WITH S	WHICH OWNERS IN THE
USOS CI	Angery Readers	Ben Gergret	104.112 007042848 001040848		CHEMICAGE WITH 12	WHILE ON ACTIVITIES
tania.	tere's Protonia	Cessington	ANR/03.47	P (22.400 P)	enex, renam	NUMBER AND A STREET OF STREET
			ANADO B	ENTERNER ENTERNER	6 PMA, 8HT-463 5	Step Part A, Brill Add Grey Part A
			100000.0	(87-600 PH)	Park, SP-Distan	PMA.67-8 PMB
						۲
						No del for altantar (Column)
		59	•		Speci	
	OSPC Heavy Industri & Number Coast		no. Texas ta		Partie Profiler Cale	Section and the sector of the
	100 CT 100 CT					



Work Spaces

Engine room, Machinery spaces, galley And accommodations



System Reference	Area	Coatings System	Surface Preparation	Specify Dry Film Thickness
WS-1	Work Spaces	Ayapoxi 83 TL – Surface Tolerant Epoxy	SSPC-SP10	100 - 150  mic $4 - 6  mils$
	(Engine room,	Ayapoxi 83 TL – Surface Tolerant Epoxy	Sa 2 1/2	100 – 150 mic 4 – 6 mils 200 – 300 mic 8 - 12 mils
WS-2	Machinery	Ayapoxi 68 – High Technology Epoxy	SSPC-SP10	100 – 125 mic 4 – 5 mils
	spaces, galley And	Ayapoxi 68 – High Technology Epoxy	Sa 2 ½	$\begin{array}{ c c c c c } \hline 100 - 125 & \text{mic} & 4 - 5 & \text{mils} \\ \hline 200 - 250 & \text{mic} & 8 - 10 & \text{mils} \\ \hline \end{array}$
WS-3	accommodations.	Ayapoxi 70 – High Performance Epoxy	SSPC-SP10	100 – 125 mic 4 – 5 mils
	Systems WS-3 and WS-4 are	Ayapoxi 70 – High Performance Epoxy	Sa 2 ½	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
WS-4	available with	Ayalkyd 60 PA – Alkyd Primer		75 – 100 mic 3 – 4 mils
	SOLAS approval)	Ayalkyd 45 – Alkyd Top Coat		50 - 75 mic $2 - 3$ mils
WS-5		$\Delta x = a + i = 0$		125–175 mic 5-7 mils
VVJ-J		Ayapoxi 83 TL – Surface Tolerant Epoxy and either:	SSPC-SP10 Sa 2 ½	125 – 150 mic 5 – 6 mils
		Ayapoxi 45 EA – Acrylic Epoxy Coating		50 – 75 mic 2– 3 mils
		or: Ayakron 66 HS – Aliphatic Polyurethane		50 – 75 mic 2– 3 mils
		or: Ayasilox 55 PX – Acrylic Polisiloxane		50 – 75 mic 2– 3 mils
		ryddior 33 i'r riefyne i ondiordife		175 – 225 mic 7 – 9 mils
WS-6		Ayapoxi 68 – High Technology Epoxy and either:	SSPC-SP10 Sa 2 ½	125 – 150 mic 5 – 6 mils
		Ayapoxi 45 EA – Acrylic Epoxy Coating or:		50 – 75 mic 2– 3 mils
		Ayakron 66 HS – Aliphatic Polyurethane or:		50 – 75 mic 2– 3 mils
		Ayasilox 55 PX – Acrylic Polisiloxane		50 – 75 mic 2– 3 mils
				175 – 225 mic 7 – 9 mils
WS-7		Ayapoxi 70 – High Performance Epoxy and either:	SSPC-SP10 Sa 2 ½	125 – 150 mic 5 – 6 mils
		Ayapoxi 45 EA – Acrylic Epoxy Coating		50 – 75 mic 2– 3 mils
		or: Ayakron 66 HS – Aliphatic Polyurethane		50 – 75 mic 2– 3 mils
				175–225 mic 7–9 mils





THIS DOCUMENT TO BE RETAINED FOR LEGAL FURPORES

Artisterskor y Andrafte Affr. 1.A. Alexak, Alex. Tel-Astropolysis Sector (191. Tel-Astropolysis) Sector (191. Tel-Astropolysis)

ospc

 Heavy Industrial & Native Coatings

SUBJORDAR CONSIDERY DECLARATION OF CORPORATIV

land is an element in the MARPE SQUEMONT DESCRIPTIONS (NO.1)

This is in savidy that is compliance with the Council Directory 1998360 of 20 Dependent 1998 on market applyment, as another by Completing Directory MiddleC, 200255360, 200255600, 200255600, 200255780 and 200255800 of the Encount Parkament and of the Cranel, ant SV-751 Method Recognition Agreement 2005520900

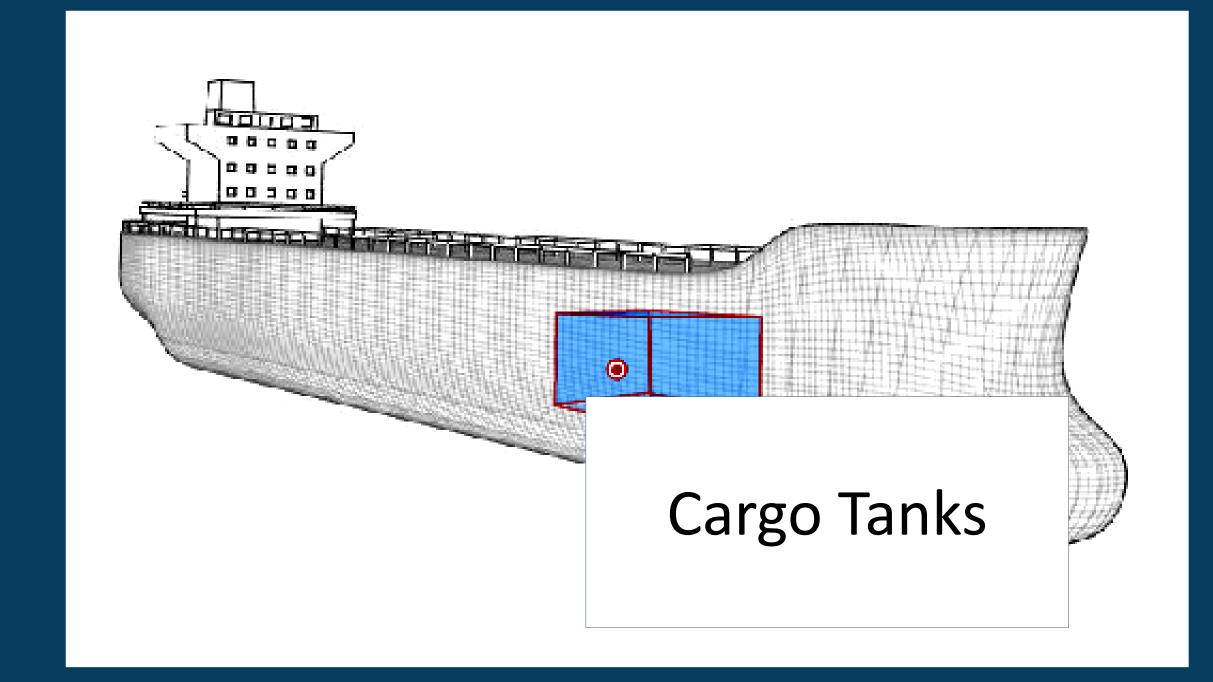
Declares during production detailed below readings (c) to type as required by the above Directives as evidence (b); the Conformity Decis below.

ET Tor Barnator (Mako- Russ	N Configuration	MED-4050373	Equipy 1950/0016	issued by the GCA under Set Marshe Verlag ASSPropriates
RE PRODUCTS CONTRACTOR	n fan styl Se	MEASURE.	Englisy 20/12/2011	issued by the QCL under Celtricity Vertice AS Projectures
PRO Amerikali	Dens Mont	A.19.181		
	Ben Despetich	(1) Party systems	US AND PLOGE COMPANY	SEWEN LOWALINE ON MICHINESION
US05 CHagory Number:	Ben Gergretoni	104.112 SUMATERATIVAS SMICHAERATIV		SEWER-LOWALINE OF MACTEMISTICS
Naturation of Protonia	Crangelon -	AND/03-67F	PEP-808 Pest Part /	FEA 215 WARE PARA, FEA 8 AND 9
		ANANCIA RE	BH1405 Red Parts BH18 Part B	, END-46 Only Parts, END-44 Only Parts,
		100000.0	(07-000 PeriPatiA)	EP-21510112-Pust A, EP-8 Pust B)
Sandaria Agenciae		INO RECEIPTION FOR		naet 2 maantii aantii aanaen 2
				Ø

Syned Syned Same See Handweiger, Steding Hanne Same Status, Sality Franken Theorical Subjectivity Provident Science President Sale Sale

> - 000% there induced a table to the large and all product spaces residented in the publication are independent, or instrument in the instrument way Andrew Mith

Cargo Tanks Tanks for cargo



System Reference	Area	Coatings System	Surface Preparation	Specify Dry Film Thickness
CT-1	Cargo Tanks (If carriage of highly aggressive cargo is	Ayapoxi 54 EN – Epoxy Novolac Tank Lining Ayapoxi 54 EN – Epoxy Novolac Tank Lining Ayapoxi 54 EN – Epoxy Novolac Tank Lining Ayapoxi 54 EN – Epoxy Novolac Tank Lining	SSPC-SP10 Sa 2 ½	125 – 150 mic       5 – 6 mils         Stripe       Stripe         Stripe       Stripe         125 – 150 mic       5 – 6 mils         200 – 300 mic       8 - 12 mils
CT-2	intended, specify the coating system utilizing three full coat to obtain	Ayapoxi 54 EN – Epoxy Novolac Tank Lining Ayapoxi 54 EN – Epoxy Novolac Tank Lining	SSPC-SP10 Sa 2 ½	$\begin{array}{cccc} 125-150 \mbox{ mic } 5-6 \mbox{ mils} \\ Stripe & Stripe \\ 125-150 \mbox{ mic } 5-6 \mbox{ mils} \\ Stripe & Stripe \\ 125-150 \mbox{ mic } 5-6 \mbox{ mils} \\ 300-375 \mbox{ mic } 12-15 \mbox{ mils} \end{array}$
CT-3	maximum performance. Contact GSPC Technical Service for chemical	Ayapoxi 64 EF – Epoxy Phenolic Tank Lining Ayapoxi 64 EF – Epoxy Phenolic Tank Lining Ayapoxi 64 EF – Epoxy Phenolic Tank Lining Ayapoxi 64 EF – Epoxy Phenolic Tank Lining	SSPC-SP10 Sa 2 ½	125 – 150 mic       5 – 6 mils         Stripe       Stripe         Stripe       Stripe         125 – 150 mic       5 – 6 mils         250 – 300 mic       8 - 12 mils
CT-4	resistance list	Ayapoxi 83 TL – Surface Tolerant Epoxy Ayapoxi 83 TL – Surface Tolerant Epoxy Ayapoxi 83 TL – Surface Tolerant Epoxy	SSPC-SP10 Sa 2 ½	125 – 150 mic       5 – 6 mils         Stripe       Stripe         125 – 150 mic       5 – 6 mils         250 – 300 mic       10 - 12 mils
		Only for new constriction, not for maintenance:		
CT-5		Ayazinc 62 Z – Inorganic Zinc Coating	SSPC-SP10 Sa 2 ½	75 – 100 mic 3 –4 mils





THE DOCUMENT TO BE RETAINED FOR LEGAL PURPOSES

guest

re

uodn

available

conformity

of

Declaration

MarED

Artistenskar y Askada Artis I.A. Alexak, Artis I.a. Artisteksi Artistek, Vitt. Ind. Artisteksi Artisteksi Vitt. Ind. Artisteksi Artisteksi Vitt.

ENDOFERS COMPARED DECLARATION OF CORPORATIV

Invation according to the South State of the South

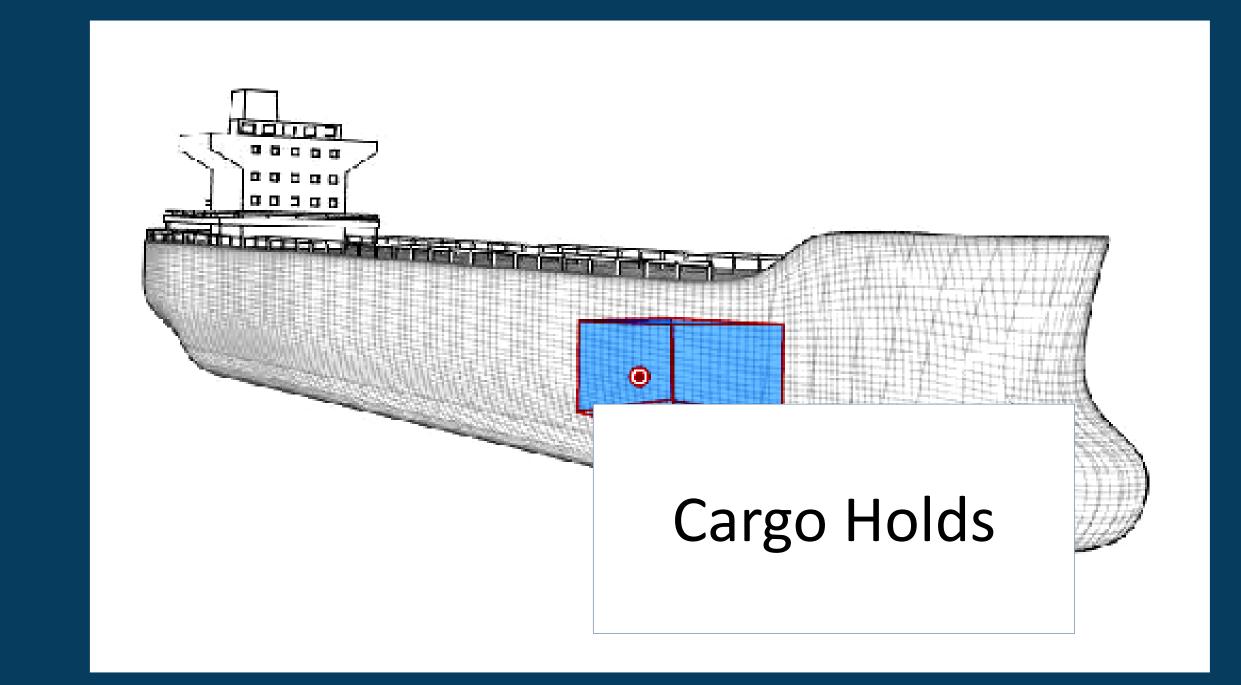
This is to untilly that in compliance with the Council Directive 90008000 of 20 December 1996 on marine appiptures, as another by Commission Directives 9600000; 200000000; 20020080; 20020000; 200800000 and 200800000 of the Barryson Parliances and of the Cruenti, and SV-50 Method Recognition Agreement 200802000;

Declares And the product(g) detailed below realizes (g) to type as required by the above Directives as exidence (ity the Conformity South Index)

82 Too Baamalan periot	Central of the	HERODERT	Bayley 1959-0016	instanting the QQL and the Californian Vertical ASIA mediates
	EC Medice C) Contrate of Continues No.		Englisy 2012/2011	Neurolity The QCL under Cell Marshell Version All Neuronitane
HO AMMIA.5	Den Mult	A16.161		
USES CREAT VISUALIST	Den Gespetich	GURACE HATTERNUS GURACE HATTERNUS 104.112	AND PLOGE COMPANY	SEWETH LOWING ON AN CONTRACTOR
	Res Centrelon	SUPPLE PRESS	AND PLOCE CONSTRUM	SEWETH LOWPLINE ON MICTORESTICS
Parada and S Pediate	Cestigetory	ANDOLLOP		FER 215 WHEN PARA, FER 8 Rev 80
		ANADO IB	enterneti	, EXT-46 Only Park A, EXT-448 Only Park A,
		ANIPOS 47	(\$2.400 PeriPat A.)	EP-DESIGN PHILA, EP-B PARKS
Sandarik Agelintik		NAC REALING A NETS NAC MIRCICLE 1430 NGC (THI (2000)	(*19* 1118) Annes 117	â
				CONTRACTOR OF A CONTRACTOR OF
	Speci			Spel
	Parties Con	See Manhongro, Med Theorida Separations		Name Samil Manin Bellin Poster Boosaire President Cale
OSPC Heavy Robuston & Review Control	<u>.</u>			
1 A MARINE CAME				is the interface and all product means mentioned in make (c), or instruction, including where y had also with

Cargo Holds

Cargo areas, spaces for carrying cargo



System Reference	Area	Coatings System	Surface Preparation	Specify Dry Film Thickness	
CH-1	Cargo Holds	Ayapoxi 70 – High Performance Epoxy Ayapoxi 70 – High Performance Epoxy Ayapoxi 70 – High Performance Epoxy	SSPC-SP10 Sa 2 ½	$\begin{array}{cccc} 125 - 150 & \text{mic} & 5 - 6 & \text{mils} \\ & & \text{Stripe} & & \text{Stripe} \\ 125 - 150 & \text{mic} & 5 - 6 & \text{mils} \\ & & 250 - 300 & \text{mic} & 10 - 12 & \text{mils} \end{array}$	
CH-2		Ayapoxi 68 — High Technology Epoxy Ayapoxi 68 — High Technology Epoxy Ayapoxi 68 — High Technology Epoxy	SSPC-SP10 Sa 2 ½	$\begin{array}{cccc} 125-150 \mbox{ mic } 5-6 \mbox{ mils} \\ Stripe & Stripe \\ 125-150 \mbox{ mic } 5-6 \mbox{ mils} \\ 250-300 \mbox{ mic } 10-12 \mbox{ mils} \end{array}$	
CH-3		Ayapoxi 83 TL – Surface Tolerant Epoxy Ayapoxi 83 TL – Surface Tolerant Epoxy Ayapoxi 83 TL – Surface Tolerant Epoxy	SSPC-SP10 Sa 2 ½	$\begin{array}{cccc} 125-150 \mbox{ mic } 5-6 \mbox{ mils} \\ Stripe & Stripe \\ 125-150 \mbox{ mic } 5-6 \mbox{ mils} \\ 250-300 \mbox{ mic } 10-12 \mbox{ mils} \end{array}$	
CH-4		Ayapoxi 83 TL – Surface Tolerant Epoxy Ayapoxi 83 TL – Surface Tolerant Epoxy	SSPC-SP10 Sa 2 ½	Stripe Stripe 200 – 250 mic 10 - 12 mils	

CH-5	Ayapoxi 83 TL – Surface Tolerant Epoxy Ayapoxi 83 TL – Surface Tolerant Epoxy Ayakron 73 HS – Aliphatic Polyurethane	SSPC-SP10 Sa 2 ½	125 – 150 mic       5 – 6 mils         Stripe       Stripe         100 – 125 mic       4 – 5mils         225 – 375 mic       9 - 11 mils
CH-6	Ayapoxi 83 TL – Surface Tolerant Epoxy Ayapoxi 87 TG – Glass flake Epoxy	SSPC-SP10 Sa 2 ½	StripeStripe300 - 400 mic12 - 16 mils





#### THIS DOCUMENT TO BE RETAINED FOR LEGAL PURPOSES

quest

Le Le

uodn

available

of conformity

Declaration

MarED

Antisamerikan yi Antisafan Afri, B.A. Alemak, Akri, Tal-antisatikan Kanasa, Vije, Tal-antisatikan Kanasa, Vije, Tal-antisatikan

BUBOORERS COMPARED DECLARATION OF CORPORADLY

#### land in sconferencifi for MARINE SQUEMENT DESCRIPTIONS

This is in ratify that is compliance with the Creasil Directive 999338C of 20 December 1996 on market opsigners), as annulate by Commission Directives 998098C, 20022338C, 20027358C, 200283426C, 20089278C and 2008288C of the December Parkament and of the Creasil, antiSV-00134abud Recognition Agreement 20043298C.

Endance that the product(c) details if taken enables (c) is type as required by the above Educations as exidence (b) its Conformity Socie below.

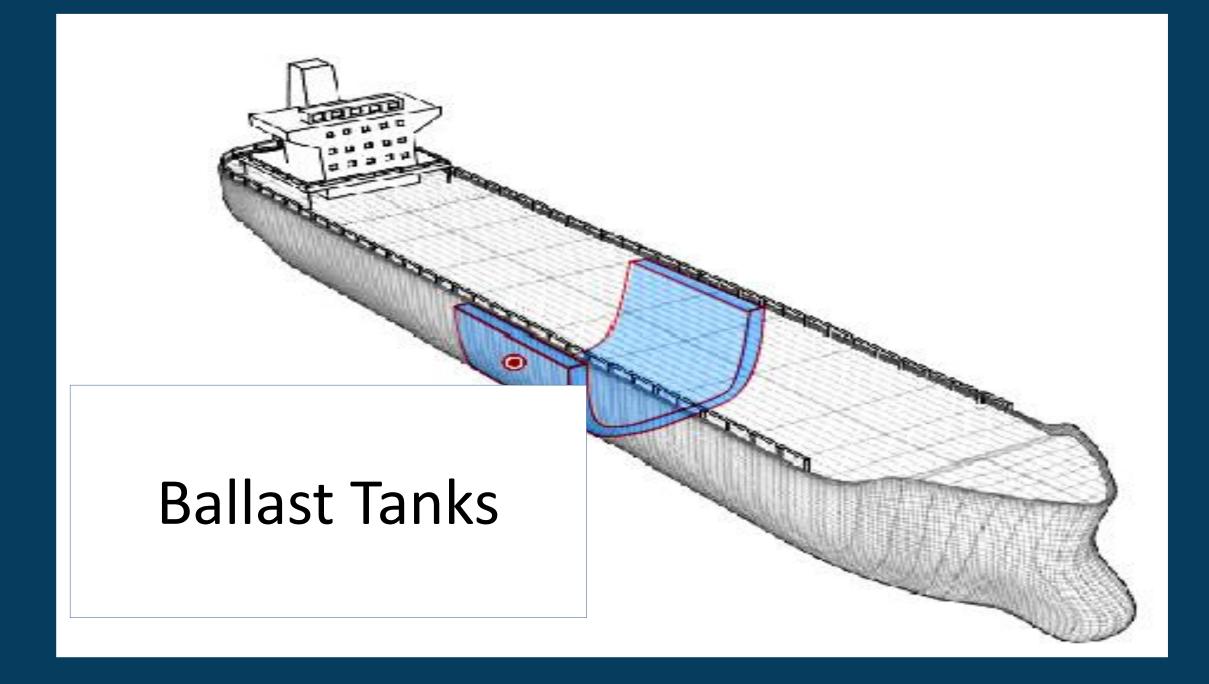
ECT ge Blannatur (Hubble) Ge Blannatur		HE0405123	Biging 1996/0016	Instantility The QCL under Cet Marsha Verligt ASIP mediates	
Pulus EC Module O) Centilode (PC) Purchaster So		HEORIES	Englisy 2010/2011	issuedley the QCA under Cellatorske Verlige ASSPRIE	
PRO America-S	Dens Mont	A19.89			
	Ben Gergretoni	()) Part systems			
USOL Category Readown	Ben Desgretori	194,112 SUSACE HISTERAULAND ALOSE CONSIGNED WITH USAVALINE CHARACTERISTICS (WTENDAR 2010-0)			
Residence's Proteit	Cestigen	AND DOL 67	(PEP-808 Pest Part A	FER 216 VIDE FACA, FER 8 Rev 80	
		ANANDO BE	ENTERNIE ENTERNIE	BHT-46 Ony PatiA, BHT-48 Ony PatiA,	
		ANN/NOVALC	(02-000 PeriPast A.)	EP-24550 PM-6, EP-8 PM-6	
Samara Aparata		NAC BY NECKING CONTROL	3. <b>9</b> 79-11183Annes 17	and and and arrend	
	Speci			Speci	
	faarin Faarin Gaar	Terris Separation		Name Sale 3. March Bally a Posting Excellent President Date	
OSPC Heavy Industrial & Review Continge				Millerine forthings and all product names medicated in marks of an increased in tradition of the state of the	



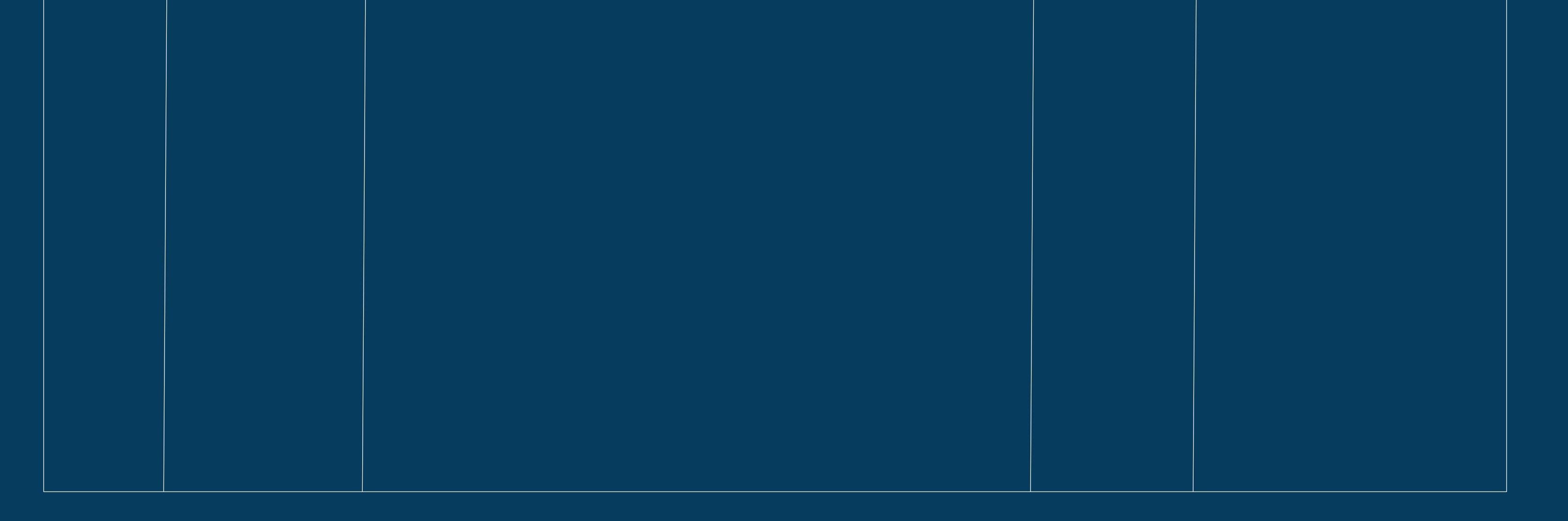
## CERTIFIED

## MARINE COATINGS

Ballast Tanks



System Reference	Area	Coatings System	Surface Preparation	Specify Dry Film Thickness	
BT-1	Ballast Tank	Ayapoxi 83 TL – Surface Tolerant Epoxy Ayapoxi 83 TL – Surface Tolerant Epoxy Ayapoxi 83 TL – Surface Tolerant Epoxy	SSPC-SP10 Sa 2 ½	$\begin{array}{cccc} 125-150 \mbox{ mic } & 5-6 \mbox{ mils} \\ Stripe & Stripe \\ 125-150 \mbox{ mic } & 5-6 \mbox{ mils} \\ 250-300 \mbox{ mic } & 10-12 \mbox{ mils} \end{array}$	
BT-2		Ayapoxi 70 – High Performance Epoxy Ayapoxi 70 – High Performance Epoxy Ayapoxi 70 – High Performance Epoxy Ayapoxi 70 – High Performance Epoxy	SSPC-SP10 Sa 2 ½	$125 - 150 \text{ mic} \qquad 5 - 6 \text{ mils}$ $Stripe \qquad Stripe$ $Stripe \qquad Stripe$ $125 - 150 \text{ mic} \qquad 5 - 6 \text{ mils}$ $250 - 300 \text{ mic} \qquad 8 - 12 \text{ mils}$	
BT-3		Ayapoxi 68 — High Technology Epoxy Ayapoxi 68 — High Technology Epoxy Ayapoxi 68 — High Technology Epoxy Ayapoxi 68 — High Technology Epoxy	SSPC-SP10 Sa 2 ½	$125 - 150 \text{ mic} \qquad 5 - 6 \text{ mils}$ $5 \text{ stripe} \qquad 5 \text{ tripe}$ $5 \text{ tripe} \qquad 5 \text{ tripe}$ $125 - 150 \text{ mic} \qquad 5 - 6 \text{ mils}$ $250 - 300 \text{ mic} \qquad 8 - 12 \text{ mils}$	







THE DOCUMENT TO BE RETAINED FOR LEGAL PURPOSES

Name 2.44.3 March, Ballyon Position Excellent President

000% there into that a basis of participation of a product series residented in this publication are independent of an internet in the last scheme A address of the

Cite inter

Antonine Kerry Andreader Arts, EA. Abreak, Alts. Tel-Antoniosia Telesca Vitt. Tel-Antoniosia and the late of the second data to be the second of

#### ENDOFERS COMPARY DECLARATION OF CONFORMERY

land is seen inservit Ga MARCH SQUEMENT DESCRIPTIONS

This is in saving the in compliance with the Creasel Directive 9939350 of 21 December 1996 on matter appipulati, as anomalo by Completion Description MERSEC, 2002/1980, 2002/1980, 2002/0480, 2008/1980 and 2008/2980 of the Burgers Parliament and of the Cruesil, as #307-037 Method Resignation: Agreement 3004309800

Declares And for product(g) details (below configure)() to type as required by for shore Directions as existence (by the Configurity South Index)

EC Type (Secondary (Holder 6) Confidences			HEROBERT	Enpiny 19/04/2016	issuellis, the QCL under Cestionian Vertice ASProjectures		
PLUS SC Plus	na antas eran	inaly Se	HEORINE	Exploy 2010/0011	issued by the QCA under Cethiontic Visites ACCA and an		
1950	Arrent A.S.	Den Meri	A19.10				
		Ben Desperant	SUMARE INTERACTION AND PLACE CONTRACTOR WITH CONTRACT OR MACTORISTIC OUT OF Systems				
U605.CM	ng ny fikazônen	Den Gergretoris	104.112 SUMACE INTERACE AND PLOSE CONSTRUCTIVE COMMITTEE OF MACTEMISTICS (W104104 AND FA)				
Pendita	ee's Postati	Cesarge and	ANR/03.0P	(757-808 Peri Peri A	FEA 215 WERE PARA, FEA 8 AND 9		
			ANADOR BE	ENTERNING PARA ENTERNIES	BHT-4G Gray Part A, BHT-44E Gray Part A,		
			ANIPOS (2	(PAGE PHIPMA)	P-2161/Ve Pas A, SP-8 Pat IS		
(antaŭ	Applicate		NO RM MECHANIS) NG MECHANIS NG (TH (2000)	1 <b>717-1118</b> 1A008117	and a model and decrees 2		
					Ø		

The Manager, Mading The state Support Dra

Speci

fueller Gele

ospc

. Heavy Industrial & Martine Coatlings



uodn

conformity

of

Declaration

 $\square$ 

MarEl



Follow the appropriate surface preparation method according ISO, SSPC or NACE to reach the longest term durability for your coatings system



## Offices & Facilities

## North & Central América South America & Caribbean

**Sales Office** Sales Office

#### **ANTICORROSIVOS Y ACABADOS AYA S.A.**

Oficinas : Zona Procesadora para la Exportación de Albrook, Edificio 8 A, Corregimiento de Ancón, Ciudad de Panamá, República de Panamá Teléfonos: (507) 232 6691- (507) 2326692 Fax: (507) 2326690 Email: pinturasaya@gmail.com http://www.pinturasaya.es.tl Apartado Postal 0819-05572 Panamá, República de Panamá RUC: 1059896-1-549487 DV 48

#### **ANTICORROSIVOS Y ACABADOS AYA C.A.**

**Oficinas: Ave. Libertador, Centro Comercial Ave. Libertador, Piso 3,** Oficina 3-6 La Florida – Distrito capital - Caracas Teléfonos: (58)(212) 7624626 – 7624987 Fax: (58)(212) 7625003 Email: pinturasaya@cantv.net http://www.pinturasayaca.es.tl Caracas – República Bolivariana de Venezuela **RIF: J000739633** 

#### Manufacturing Facility Manufacturing Facility

#### **ANTICORROSIVOS Y ACABADOS AYA S.A.**

Planta : Zona Procesadora para la Exportación de Albrook, Edificio 8 A, Corregimiento de Ancón, Ciudad de Panamá, República de Panamá Teléfonos: (507) 232 6691- (507) 2326692 Fax: (507) 2326690 Email: pinturasaya@gmail.com http:// www.pinturasaya.es.tl Apartado Postal 0819-05572 Panamá, República de Panamá RUC: 1059896-1-549487 DV 48

### **ANTICORROSIVOS Y ACABADOS AYA C.A.**

Planta: Calle 3 con Carrera 6, Parcelas 23, 24 y 25 Zona Industrial Condibar 2, Barquisimeto, Edo Lara. Teléfonos: (58)(251) 2692526 – 2691252 Fax: (58)(251) 2692929 Email: pinturasaya@cantv.net http://www.pinturasaya.com Barquisimeto - República Bolivariana de Venezuela **RIF: J000739633** 



