



CERTIFICATE NUMBER

14-LD1135810A-PDA-01

DATE

23 January 2014

ABS TECHNICAL OFFICE

London Engineering Department

CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of
CHEMCO INTERNATIONAL - SCOTLAND

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

PRODUCT: **IMO PSPC Approved Seawater Ballast Tank Coating**

MODEL: **RS 500P/RA 500M ON BARE STEEL AND BLAST CLEANED STEEL SURFACES.**

This Product Design Assessment (PDA) Certificate 14-LD1135810A-PDA-01, dated 23/Jan/2014 remains valid until 22/Jan/2019 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING


Andrew Worrall
Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This application/certificate is governed by the "Terms and Conditions of the Request for Product Type Approval and Agreement" as contained in the ABS Rules.

TERMS & CONDITIONS OF ABS DESIGN ASSESSMENT

1. AGREEMENT

Unless otherwise agreed in writing, all services rendered and certificates issued are governed by the terms and conditions of the "Request for Product Type Approval and Agreement" (the "Agreement") which are hereby incorporated by reference.

2. REPRESENTATIONS AS TO DESIGN ASSESSMENT

A certificate of design assessment represents that the product design meets the ABS, statutory, industrial or manufacturer's standard described on the reverse hereof and that the manufacturer has established a systematic quality monitoring system sufficient to show its capacity to consistently manufacture a product which meets the designated standards. ABS is not a substitute for the independent judgment of professional designers or engineers nor a substitute for the quality control procedures of constructors, steel makers, suppliers, manufacturers and vendors of marine structures, materials, machinery or equipment. ABS represents solely to the manufacturer or other client of ABS that it will use due diligence in developing Rules, Guides and standards and in surveying the plant as called for by ABS criteria for type approval.

3. SUSPENSION OF CERTIFICATION

Any of the following events will cause immediate suspension of the certificate of design assessment unless the change is submitted to ABS for a new review and audit.

- a) Redesign of the product or products covered by this certificate;
- b) Change in production methods;
- c) Substantial change in management organization;
- d) Substantial change in frequency or curriculum for personnel training;
- e) Refusing access to ABS personnel for periodic or annual audits;
- f) Failure to correct a non-compliance identified during an audit or in service;
- g) Failure to pay ABS fees.

4. VALIDITY

The validity, applicability and interpretation of a certificate issued under the terms of or in contemplation of ABS Type Approval are governed by the Rules, Guides and standards of American Bureau of Shipping which shall remain the sole judge thereof. Nothing contained in this certificate or in

any report issued in contemplation of this certificate shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied, nor create any interest, right, claim or benefit in any third party. It is understood and agreed that nothing expressed herein is intended or shall be construed to give any person, firm or corporation other than the parties hereto, any right, remedy, or claim hereunder or under any of the provisions herein contained; all of the provisions hereof are for the sole and exclusive benefit of the parties hereto.

5. LIMITATION

ABS makes no representations beyond those contained herein and in the provisions of the Agreement regarding its reports, statements, plan review, surveys, certificates or other services.

6. HOLD HARMLESS

The party to whom this certificate is issued, and his assignee and successor in interest, agree to indemnify and hold harmless ABS from and against any and all claims, demands, lawsuits, or actions for damages, including legal fees, to persons or other legal entities and property, tangible, intangible, or otherwise which may be brought against ABS incidental to, arising out of or in connection with the work done, services performed or material to be furnished under this certificate, except for those claims caused solely and completely by the negligence of ABS, its agents, employees, officers, directors or subcontractors.

7. ARBITRATION

Any and all differences and disputes of whatsoever nature arising out of this agreement shall be put to arbitration in the City of New York pursuant to the laws relating to the arbitration there in force, before a board of three persons, consisting of one arbitrator to be appointed by ABS, one by Client, and one by the two so chosen. The decision of any two of the three on any point or points shall be final. Until such time as the arbitrators finally close the hearings either party shall have the right by written notice served on the arbitrators and on an officer of the other party to specify further disputes or difference under this Agreement for hearing and determination. The arbitration is to be conducted in accordance with the rules of the Society of Maritime Arbitrators, Inc. The arbitrators may grant any relief, other than punitive damages,

which they, or a majority of them, deem just and equitable and within the scope of the agreement of the parties, including, but not limited to, specific performance. Awards made in pursuance to this clause may include costs including a reasonable allowance for attorney's fees and judgment may be entered upon any award made hereunder in any court having jurisdiction. ABS and client hereby mutually waive any and all claims to punitive damages in any forum.

Client shall be required to notify ABS within thirty (30) days of the commencement of any arbitration between it and third parties which may concern ABS's work in connection with this Agreement and shall afford ABS an opportunity, at ABS's sole option, to participate in the arbitration.

8. TIME BAR TO LEGAL ACTION

Any statutes of limitation notwithstanding, Client expressly agrees for itself and its affiliated companies that its right to bring or to assert against ABS any and all claims, demands or proceedings whether in arbitration or otherwise shall be waived unless (a) notice is received by ABS within thirty (30) days after Client or its affiliates had notice of or should reasonably have been expected to have had notice of the basis for such claims; and (b) arbitration or legal proceedings, if any, based on such claims or demands of whatever nature are commenced within one (1) year of the date of such notice to ABS.

9. LIMITATION OF LIABILITY

The combined liability of American Bureau of Shipping, its officers, employees, agents or subcontractors for any loss, claim, or damage arising from negligent performance or non-performance of any services under this Agreement, of from breach of any implied or express warranty of workmanlike performance in connection with the services, or from any other reason, to any person, corporation, partnership, business entity, sovereign, country or nation, shall be limited to the greater of a) \$100,000 or b) an amount equal to ten times the sum actually paid for the services alleged to be deficient.

The limitation of liability may be increased up to an amount twenty-five times that sum paid for services upon receipt of Client's written request at or before the time of performance of service and upon payment by Client of an additional fee of \$10.00 for every \$1,000.00 increase in the limitation.

CHEMCO INTERNATIONAL
EAST SHAWHEAD INDUSTRIAL ESTATE
COATBRIDGE
SCOTLAND
ML5 4XD
United Kingdom
Telephone: +44 (0) 1236 606060
Fax: +44 (0) 1236 606070
Email: judith.fergus@chemcoint.com
Web: www.chemcoint.com

PRODUCT:
IMO PSPC Approved Seawater Ballast Tank Coating

TIER: 3

MODEL:
RS 500P/RA 500M ON BARE STEEL AND BLAST CLEANED STEEL SURFACES.

Intended Service:

A universal primer which may be used as a ballast tank coating and can be applied directly to mechanically prepared bare steel.

Description:

This coating system has been identified by infrared scanning, by determination of specific gravity, and by determination of volatile/non-volatile content.

This coating has also been assessed against the criteria for alternative systems for the following applications:-

- o Bare rusted steel
- o Wet bare rusted steel

Coating components:-

- o Epoxy resin RA 500M part A
- o Epoxy Resin RS 500P part A
- o Cycloaliphatic amine HF 500M part B
- o Formulated polyamine adduct HR 500P part B

Components manufactured at this facility

- o Epoxy resin RA 500M part A
- o Epoxy Resin RS 500P part A
- o Cycloaliphatic amine HF 500M part B
- o Formulated polyamine adduct HR 500P part B

Ratings:

Compliance of the subject coating with the IMO PSPC requirements has been verified by review of test report:-

Full test of Epoxy coating

- o Exova RS 500P and RA500M on bare steel, report number N953421
- o Exova RS 500P and RA500M on bare rusted steel, report number N953422
- o Exova RS 500P and RA500M on bare rusted wet steel, report number N953423

The report indicates that the test of the subject coating over listed shop primer; or prepared bare steel was performed using the test procedure and criteria dictated by Annex 1 of the IMO PSPC.

Service Restriction:



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- 1) The manufacturer must have a certified quality management system and be under the appropriate ABS Type Approval category, Recognized Quality System (RQS) and be audited annually.
- 2) For each batch manufactured for marine use, the manufacturer is required to issue an affidavit declaring conformity with approved type that is co-signed by the laboratory. The manufacturer is to demonstrate that the laboratory is independent from production.
- 3) The manufacturer is responsible for identifying all containers in the batch with some form of permanent marking.
- 4) The manufacturer can download the Confirmation of Type Approval from the ABS website at www.eagle.org which would be considered equivalent to a Type Approval Certificate or Statement of Compliance as mentioned in MSC 215(82).
- 5) If the manufacturer wants to subcontract the process, the secondary company is to be given a duplicate PDA and is required to do a Type Test on the product as part of its enrolment into PQA.
- 6) This Product Design Assessment will become invalid if the formulation of either the epoxy based system or the shop primer is changed. It is the responsibility of the manufacturer to inform ABS immediately of any changes to the formulation.
- 7) Unit Certification is not required for this product. If the manufacturer or purchaser requests an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
- 8) Type Approval is required for this product and annual audits must be conducted of the manufacturing facilities
- 9) For applications requiring coating system approval in accordance with IMO PSPC MSC.215(82), use on suitable prepared bare steel.
- 10) The approved product is solely related to the corrosion protection properties of the subject coating system as per IMO PSPC and it is not relevant to the evaluation of the toxicity, flammability and polluting properties of the product
- 11) Provided the required surface preparation can be achieved (i.e. profile between 30-75 micro meter) any blasting method may be employed.

Comments:

This assessment was not conducted on behalf of any Administration.

Subject RS 500P/RA 500M ON BARE STEEL AND BLAST CLEANED STEEL SURFACES coating strictly to be applied in accordance with the IMO PSPC requirements and/or the requirements provided by the applicable Manufacturer's Data-sheet, whichever is stricter. Special care is to be taken during application at low temperatures to ensure that ice crystals do not form on the steel surface to be coated.

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes / Drawings / Documentation:

Term of Validity:

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STANDARDS

ABS Rules:



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2013 Steel Vessels Rules 1-1-4/7.7 & 1-1/A3; 2013

ABS Guidance Notes on the Inspection, Maintenance, and Application of Marine Coating Systems, Chapter 8
Section 10;

Guide for the class Notation Coating Performance Standard (CPS), 2006 par 5.5.2

National:

NA

International:

IACS PR34; IMO PSPC MSC.215(82)

The scope of Type Approval is to Comply with MSC.1/Circ. 1221 Dated 11th December 2006

Government Authority:

NA

EUMED:

NA

Others:

NA



