



CERTIFICATE NUMBER
16-HS1565639-PDA

DATE
21 Sep 2016

ABS TECHNICAL OFFICE
Corporate Technology Admin

CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of

EXCEL MARCO INDUSTRIAL SYSTEMS PTE LTD.

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: **Software**

Model: **ICSS, PCS, IAS, RSD,ESD, FGS, VMS, EMS, PMS;**

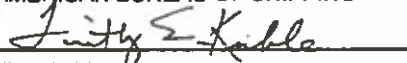
This Product Design Assessment (PDA) Certificate 16-HS1565639-PDA, dated 21/Sep/2016 remains valid until 20/Sep/2021 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

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


Tim Kimble
Engineer/Consultant

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 certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A/3.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

EXCEL MARCO INDUSTRIAL SYSTEMS PTE LTD.

39 UBI ROAD 1

#05-00 WORLD PUBLICATIONS BUILDING

SINGAPORE

Singapore 408695

Telephone: 65-68586635

Fax: 65-68582884

Email: email@excelmarco.com

Web: www.excelmarco.com

Tier: 2 - PDA Issued

Product: Software

Model: ICSS, PCS, IAS, RSD,ESD, FGS, VMS, EMS, PMS;

Intended Service:

Developed Software Control Systems are intended for installation in the following Products (Tools), as configured or programmed following the EXCEL MARCO Project & Engineering Department Software Development Process: Marine and Offshore On-board Control System's software developed at the above location.

Description:

This assessment is a representation by ABS of the degree of conformity to, and implementation of, the policies and procedures related to applicable sections of the ABS Integrated Software Quality Management (ISQM) Guide. This assessment does not waive unit certification or classification procedures required by ABS Rules and applicable Guides for products to be installed in ABS Classed Vessels, Mobile Offshore Drilling Units, or Facilities. This certificate, by itself, does not reflect that the product controlled by the developed, configured, and programmed software is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this Integrated Software Quality Management Product Design Assessment Certificate (ISQM-PDA).

This ABS Product Design Assessment Certificate for quality software development is awarded to EXCEL MARCO Project & Engineering Department based on conformity with the quality standards set by ABS' ISQM Guide for software development processes. This certificate confirms that EXCEL MARCO Project & Engineering Department has demonstrated application of quality standards, procedures, and policies in software development sufficient for the implementation of ISQM.

Rating:

Excel Marco-Signed, Revision: -15

Service Restriction:

Unit software certification is not required for the software quality management processes that have been assessed; however, unit certification may be required for the separate and individual products listed above. If the manufacturer or purchaser of the products listed above requests an ABS certification for compliance with a specification or standard, then that specification of standard, including inspection standards and tolerances, must be designated and provided to ABS for the purposes of performing that certification.

Comments:

This ISQM-PDA has been earned by EXCEL MARCO Project & Engineering Department based on the American Bureau of Shipping evaluation of the software quality policies and procedures followed by EXCEL MARCO Project & Engineering Department during the development, programming, and configuration of software and installed as control systems in the above listed products or equipment. This certificate verifies that the EXCEL MARCO Project & Engineering Department utilizes recognized software development policies, procedures, templates, and documents development, programming, and configuration of quality software for the products produced at this location.

Notes/Drawing/Documentation:

Drawing No. Correspondence, Email 19-Sep-2016 subj: Excel Marco Type approval form, Revision: -, Pages: -
Drawing No. Type Approval Application, Type Approval Application-Excel Marco-Signed, Revision: -15, Pages: 1
This ISQM-PDA is valid for the software quality policies and procedures used by EXCEL MARCO Project & Engineering Department located in Singapore, for developing the control system software for the products listed above.

Terms of Validity:

This Product Design Assessment (PDA) Certificate 16-HS1565639-PDA, dated 21/Sep/2016 remains valid until 20/Sep/2021 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

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STANDARDS

ABS Rules:

2016 Guidance Notes for Integrated Software Quality Management (ISQM) - Software Provider Conformity Program

2012 Guide for Integrated Software Quality Management (Up-dated Feb. 2016)

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA