Certificate No: LR2573574TA
Issue Date: 02/06/2025
Expiry Date: 13/04/2030

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	**Pleiger Maschinenbau GmbH & Co. KG**
Address	Im Hammertal 51, Witten, 58456, Germany
Place of Production	Pleiger Maschinenbau GmbH & Co. KG Im Hammertal 51, Witten, 58456, Germany
Type	Power Distribution Systems & Power Supplies
Description	Electric-Hydraulic System EHS EHS-D3 Power pack for double acting actuators - position indication open/close by Hall- sensor - position indication continuous by potentiometer EHS-S3 Power pack for single acting actuators - quarter turn with Hall-sensor for indication - linear with proximity switch for indication EHS-ExD3 Power pack for double acting actuators - explosion proof EHS-UD3 Power pack for double acting actuators - submersible IP68 (15 bar, 20 days) - special glands to be used (see manufacturers wet cabling description)

Downloaded Copy

Thorsten Wolff

Electrical & Control - Senior Specialist to
Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

Type Approval Certificate

Trade Name	EHS-D3, EHS-S3, EHS-ExD3, EHS-UD3
Application	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2, ENV3 and ENV5 as defined in Lloyd's Register's Type Approval System, Test Specification No. 1 - 1996.
Specified Standard	Manufacturer's specification IACS unified requirements E10 (Rev.9 Aug 2023)
Ratings	Ex marking for EHS-ExD3: II 2G IIC T6 -20 °C ≤ Ta ≤ +50 °C
Additional Tests	Enclosure protection: IP 68 (1 bar, 36 hrs) for power pack IP 68 (15 bar, 20 days) for EHS-UD3
Other Conditions	Specific Conditions of Use as stated in applicable Ex-certificates and the conditions of the LR Ship Rules & Regulations of Classification of Ships Part 6, Chapter 2 shall be observed when installed in hazardous areas. The Ex-certification does not form part of this certificate. Examination of software aspects is restricted to functional operation as demonstrated according to test protocol "EHS Controller 2, V 1.11". Plans of "Electric Hydraulic SystemEHS" used for bilge and ballast systems are to be submitted to Lloyd's Register for vessel related Plan Appraisal. The EHS system may be used as a valve control system for dewatering of forward spaces of bulk carriers as required bySOLAS - Chapter XII Regulation 13.1. It is concluded that documentation of the EHS System will be part of the documentation file covering the entire installation of the dewatering system and will be submitted by the responsible party to the attending surveyors prior

Downloaded Copy

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

Type Approval Certificate

to survey.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: LR2017235TA

The Design Appraisal Document TSO-25-035194/TW and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Downloaded Copy

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.