

LLOYD'S REGISTER TYPE APPROVAL – DESIGN APPRAISAL DOCUMENT

Issued by: Hamburg Technical Support Office (HPC1861043)

Issued to: KME GERMANY AG & CO. KG

For:

**OSNALINE® TUBES AND TUBE BUNDLES, MULTITUBING,
MULTICORE, OSNALINE® PROTECTION**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System Procedure TA14 Version 03 (July 2017) and this Design Appraisal Document forms part of the Certificate.

COMMENTS

1. Hydraulic tests before installation on board in compliance with Part 5, Chapter 12, Section 8 of the Rules have to be carried out to the attending surveyors' satisfaction.

APPROVAL DOCUMENTATION

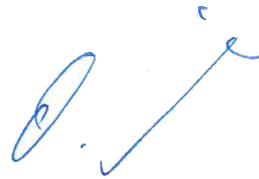
Form 2571	Application for Type Approval	29.08.2018
98/20023 (E3)	Previous LR TA Certificate	25.04.2013
HMD 10868-03 Issue 2	Design Appraisal Document	25.04.2013
78M RM Rev 9	Product Specification	22.11.2019

TEST REPORTS

HPC1861043	PQA report	19.11.2018
03/101	IEC 60332-3-22, Cat. A/F Pipe bundle OSNA TPU	03.06.2003
08/0543e	IEC 60332-3-21-2000, Cat. A/F PVC Outer Sheet OSNA 2000 Pb free	24.06.2008
07/117e	IEC 60332-3-22, Cat. A/F Pipe bundle OSNA PE HM2	13.02.2007
VN00.1.1	IEC 332-1-1 PCV YM3 –Tube 1x12x1/1.4571	28.06.2000
VN00.1.2	IEC 332-1-1 PCV YM3 – Tube bundle 2x8x1/1.4571	28.06.2000
VN00.1.3	IEC 332-1-1 PCV YM3 – Tube bundle 4x10x1/1.4571	28.06.2000
VN00.1.4	IEC 332-1-1 PCV YM3 – Tube bundle 10x8x1/1.4571	28.06.2000
VN00.1.5	IEC 332-1-1 PCV YM3 – Tube bundle 19x9.52x1.25/1.4571	28.06.2000



Dirk Schröder
Specialist
Engineering Systems
Hamburg Technical Support Office
Lloyd's Register EMEA
T +49 (0)40 34 97 00 10-198
E dirk.schroeder@lr.org



Olaf Schmidt
Lead Specialist
Engineering Systems
Hamburg Technical Support Office
Lloyd's Register EMEA
T +49 (0)40 34 97 00 10-192
E olaf.schmidt@lr.org

Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.



Page 3 of 3
Certificate No: LR2002659TA
Issue Date: 23/04/2020
Expiry Date: 27/02/2023
Document No: HMD 10868-03, Issue No. 3

Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.

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.

