中国船级社
CHINA CLASSIFICATION SOCIETY

证书编号/Certificate No.
HB25PTA00011_02

型式认可证书
CERTIFICATE OF TYPE APPROVAL

兹证明本证书所述制造厂具备按照下列标准的要求生产本证书所列产品的能力和条件。
This is to certify that the manufacturer stated in the certificate meets the requirements of the standards listed below and is available with the ability and conditions to produce the products described in the certificate.

制造厂/Manufacturer

KRAL GmbH

地址/Address

Bildgasse 40, 6890 Lustenau, Austria

产品名称/Product

管系附件
Pipe Fittings and Components

认可标准/Approval Standard

1. 中国船级社《钢质海船入级规范》第3篇第2章
Chapter 2, Part Three of China Classification Society Rules for Classification of Sea-Going Steel Ships

用于/Intended for

船舶/Ships

证书有效期至/This Certificate is valid until **2030年12月26日/ Dec. 26,2030**

发证机构 中国船级社汉堡分社
Issued by CCS Hamburg Branch

签发日期 2026年02月22日
Date Feb. 22,2026

本证书根据中国船级社规范和相关规定签发。所有证书页为一个整体，必须同时使用。纸质证书每页均须由本社盖章方为有效，电子证书含数字签名方为有效，本证书复印件无效。任何单位和个人均不应摘录或节选本证书的部分内容。有关方对所持证书的真实性有疑问时，可以向我社检验机构咨询。**本证书凡是未注明版本的规范，其（发证时）最新版本适用于本证书。**
This Certificate is issued pursuant to the Rules of the Society and related regulation. All pages of the certificate are taken as a whole and are used simultaneously. No paper certificate page is valid without bearing the stamp of the Society, no electronic certificates is valid without the digital signature, and no copied form of the certificate is regarded as valid. Any part of the certificate is not to be extracted or abridged by any unit or individual in any form. Related parties who are doubted about the authenticity of the certificate may inquire of the Society or its offices. **For Rules with no version indication, their latest version (at the time of issuance of the certificate) applies to the this certificate.**

产品明细/Product Description

其他管系产品/Other Piping System Product(M0001)

名称/Name	属性（值）/Value	单位/Unit
产品名称/Product Name	Volume Flowmeter	
型号/Type	OMP	
规格/Specification	Volume Flow measurement Range Scales : 0.3-525 l/min, For max. Nominal diameter 40mm	
工作压力/Working Pressure	40 (Max.)	bar
工作温度/Working Temperature	-20...+200	摄氏度/℃
主要材料/Main Material	Spheroidal Graphite Cast Iron 0.7040 (Body Material)	
适用介质/Applicable Medium	HFO, MDO, MGO, Hydraulic fluid, lubrication oil	

其他管系产品/Other Piping System Product(M0002)

名称/Name	属性（值）/Value	单位/Unit
产品名称/Product Name	Volume Flowmeter	
型号/Type	OMG	
规格/Specification	Volume flow measurement Range Scales : 0.1-7500 l/min, For max. Nominal diameter 150mm	
工作压力/Working Pressure	250 (Max.)	bar
工作温度/Working Temperature	-20...+200	摄氏度/℃
主要材料/Main Material	Spheroidal Graphite Cast Iron 0.7040 (Body Material)	
适用介质/Applicable Medium	HFO, MDO, MGO, Hydraulic fluid, lubrication oil	

批准的图纸/Approved Drawings

图纸批准号/ Drawings Approval No.: NP14A01603

产品认可试验报告/ Approval Test Report

试验报告编号/ Test Report No.： 15W00866
试验报告日期/ Test Report Date： 2015-05-07
试验单位/ Laboratory: KRAL AG
试验单位地址/ Test Address: Bildgasse 40,Industrie Nord,6890 Lustenau, Austria

认可后的产品检验方式/ Method of Product Inspection after Approval

认可后的产品检验由制造厂按本社批准的产品检验计划进行，本社在文件审核合格后颁发船用产品证书。
After approval, product inspection should be carried out by the Manufacturer in accordance with the product inspection scheme approved by the Society, and the Marine Product Certificate is issued by the Society upon satisfactory documents review.

认可保持条件/ Maintenance Requirements of Approval

1.型式认可后，如果产品及其重要零部件的设计、所用材料或制造方法有所改变，且影响到产品的主要特性、特征；或产品的性能指标有所更改，且超过认可的范围，则有关图纸和文件应经检验机构审批。并在检验机构认为必要时，经本社检验人员见证有关试验和进行检查，其结果应能证实仍符合认可条件。
After type approval, if there are changes to the design, materials used or manufacturing method of the product and important components and such changes affect major characteristics and properties of the product, or property indexes of the product are changed and exceed the scope of approval, related drawings and documents are to be examined and approved by the concerned survey office. Where deemed necessary by the survey office, the surveyor to the Society will go to witness relevant tests and conduct inspection and the results should be able to demonstrate compliance with the approval conditions.
2.工厂的质量管理体系应保持有效运行，并且与认可时一致。如果质量管理体系发生改变，应经原体系认证机构审

核并报本社批准。
The quality management system of the factory shall be ensure effective operation, and shall be the same as the situation of approval. If there are any changes to the quality management system, auditing of the original certification organization for quality management system and the society's approval shall be obtained.
3.认可证书有效期内，如果出现可能导致本社取消认可的情况，工厂应及时采取有效的纠正措施。
Within the validity of the approval certificate, if cases occur that may cause the Society to withdraw the approval, the manufacturer should take corrective actions in a prompt and effective manner.
4.在认可证书有效期内，本社检验人员可在未经事先通知的情况下对工厂的产品制造过程进行审核，以验证产品的生产是否符合业经本社批准的图纸和文件。工厂应予以配合。
Within the validity of the approval certificate, the surveyor to the Society may pay unannounced audit to the manufacturing process of the product in order to confirm whether it is in compliance with the drawings and documents approved by the Society. The factory should provide an active cooperation and necessary for the surveyor.
5.型式认可A证书获得者应接受本社每年一次的定期审核，定期审核日为认可证书期满之日对应的每一周年日，检查工作应在周年日的前后三个月内进行。
Those who have obtained the certificate of type approval A should be subject to periodical audit every year. The date of periodical audit shall be each anniversary date which corresponds to the date of expiry of the relevant certificate and the periodical audit shall be done within a time span of three months before and after the annual surveillance date.

备注/Remarks

本社已审核了产品厂无石棉声明，但本社的审核不免除产品厂按照合同关系向订货方保证产品无石棉的责任。
The declaration of asbestos-free submitted by manufacturer has been reviewed by the Society. However, liability of the manufacturer to guarantee the products are asbestos-free to purchaser under contract will not be exempted.
本证书由原型式认可证书（No. HB22PTA00003_02）换新并替代原证书。
This certificate is renewed from and supersedes the previous Type Approval Certificate No. HB22PTA00003_02.

The flow meter utilizes twin-screw spindles within the OMG/OMP housing for positive displacement measurement. An integrated sensor converts the chamber volume into a standard industrial signal. The Type Approval Certificate covers only the mechanical assembly. The associated electronic parts such as transmitters are NOT included in the scope of this certification and have not been verified for shipboard control, monitoring, alarm, or protection systems.

中国船级社汉堡分社
CCS Hamburg Branch