中国船级社
CHINA CLASSIFICATION SOCIETY

证书编号/Certificate No.
HB25PTA00011_01

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

泵
Pump

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

螺杆泵/Screw Pump(M0001)

名称/Name	属性（值）/Value	单位/Unit
产品名称/Product Name	Screw Spindle Pumps	
型号/Type	See Additional Pages	
流量/Flow	See Additional Pages	l/min
额定转速/Rated Speed	See Additional Pages	rpm
排出压力/Delivery Pressure	See Additional Pages	Bar
泵体材质/Pump Body Material	See Additional Pages	
轴功率/Shaft Power	See Additional Pages	kw

批准的图纸/Approved Drawings

图纸批准号/ Drawings Approval No.: HBT04191020,HB08Q00003,NP14A03026,NP15A02478,NP25PPP04642

产品认可试验报告/ Approval Test Report

试验报告编号/ Test Report No.： SCREW SPINDLE PUMP
试验报告日期/ Test Report Date： 2004-10-15
试验单位/ Laboratory: Kraeutler Gesellschaft m.b.H Co.
试验单位地址/ Test Address: Lustenau,Austria

试验报告编号/ Test Report No.： HB15Q00006
试验报告日期/ Test Report Date： 2015-01-28
试验单位/ Laboratory: KRAL AG
试验单位地址/ Test Address: Bildgasse 40, 6890 Lustenau, Austria/Bildgasse 40, 6890 Lustenau, Austria

试验报告编号/ Test Report No.： Test reprot for F serials
试验报告日期/ Test Report Date： 2026-01-19
试验单位/ Laboratory: KRAL AG
试验单位地址/ Test Address: Bildgasse 40, 6890 Lustenau, Austria/Bildgasse 40, 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_01）变更并换新。
This certificate is modified and renewed from the previous Type Approval Certificate No. HB22PTA00003_01.

This certificate covers only the mechanical part of the pump or pump station. The pump or pump station control, monitoring, safety and electrical equipment and in particular the prime mover are to be type approved on a case-by-case basis.

中国船级社汉堡分社
CCS Hamburg Branch
注：本证书含有附页，共1页
Note: The certificate is attached with additional 1 page(s)

KRAL_List of products (pump and pump station)

Model series	Capacity (Max. l/min)	Delivery pressure (Max. Bar)	Working Temp. (Max. °C)	Rated revolution (Max. rpm)	Shaft power (KW)	material of casing
Pump series MV/MF/MH	500	40	250	3500	40	EN-GJS-400
Pump series KF/KV/KH	3500	16	250	1750	120	EN-GJS-400
Pump series CLC/CLF/CLH/CLL	4250	100	250	1750	700	EN-GJS-400; carbon steel; aluminium
Pump series CKC	2100	70	250	3500	360	EN-GJS-400
Pump series CGF/CGH/CGV	4250	100	300	1750	700	EN-GJS-400; carbon steel
Pump series LF/LV	205	63	250	3500	24	EN-GJS-400
Pump series ALP	660	10	155	3500	24	EN-GJS-400
Pump series RFI/RVI/RFT/RVT	500	16	180	3500	18	EN-GJS-400
Pump series F	280	120	180	3500	24	1.4435 / X2CrNiMo18-14-3 1.4571 / X6CrNiMoTi17-12-2 1.4404 / X2CrNiMo17-12-2
Single station series ELL/ELS	205	40	250	3500	24	EN-GJS-400
Single station series EKL/EKS	3500	16	250	1750	120	EN-GJS-400
Double station series DKL/DKS	3500	16	250	1750	120	EN-GJS-400
Double station series DL/DS	130	6	180	3500	5	EN-GJS-400
Double station series DLC	205	40	250	3500	24	EN-GJS-400
Double station series DKC	280	16	250	3500	11	EN-GJS-400
Double station series DALP	205	10	250	3500	11	EN-GJS-400
Double station series DKB	280	16	250	3500	11	EN-GJS-400

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