



中国船级社
CHINA CLASSIFICATION SOCIETY

证书编号/Certificate No.
CQ24PAA00004

产品检测和试验机构认可证书
CERTIFICATE OF TEST AGENCY APPROVAL

兹证明本证书所述试验机构具备按照本社接受的试验标准进行本证书所列产品试验的能力和条件。
This is to certify the agency stated in the certificate is available with the ability and conditions to test the relevant products in accordance with the standards accepted by this Society.

检测和试验机构/ Test Agency

西门子（中国）有限公司成都分公司型式测试中心

Type Test Center of Siemens Ltd., China Chengdu Branch (SIMATIC Type Test Chengdu)

地址/Address

四川省成都市郫都区高新西区天源路 99 号研发楼一楼、1E09, 1E10
1E09, 1E10 & 1/F., R&D Building, No.99, Tianyuan Road, High-Tech Industrial Development Zone (West), Chengdu, Sichuan, China

认可试验范围/Items of Test Approved

- 船用电气电子设备Electrical and electronic installations in ships:
 - 性能试验/Performance Test
 - 环境条件试验/Environmental Test
 - 电磁兼容试验/Electrical Magnetic Compatibility Test

试验主要适用标准/ Main Test Standards

- 中国船级社 GD 019-2024《电气电子产品型式认可试验指南》
Guidelines for Type Approval Test of Electric and Electronic Products of China Classification Society GD 019-2024
- 详见附页
See additional pages

认可保持条件/ Maintenance Requirements of Approval

- 产品检测和试验机构认可后，如果检测、试验设备或试验程序、方法有较大改变，应征得本社同意。若改变涉及或影响到检测、试验的结果时，本社检验人员将到厂进行检查和见证有关试验，其结果应能证实仍符合认可条件。
After test agency approval, if there are any major changes to the inspection and testing instruments or testing procedure, prior consent should be obtained from the survey office of the Society. If the changes involve or affect the results of inspection and testing, the surveyor to the Society will go to the agency to inspect or witness relevant tests and the results of the tests should be able to demonstrate compliance with the approval conditions.
- 认可证书获得者应接受本社一次定期审核，定期审核日为认可证书的期满之日对应的第二个周年日，检查工作应在定期审核日的前后三个月内进行。

Those who have obtained the certificate of agency approval shall receive periodical audit done by the Society. The date of periodical audit shall be the second anniversary date of the approval certificate 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 or after the above periodical audit date.

证书有效期至/ This Certificate is valid until 2029年03月10日 /Mar. 10,2029

发证机构/ Issued by 中国船级社重庆分社
CCS Chongqing Branch

签发日期/ Date 2025年03月11日
Mar. 11,2025

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，可以向本社检验机构咨询。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.



Form No: A01.

联系方式/Contact Us, 见本社官方网站/See official web site of the Society (<http://www.ccs.org.cn>)

UTN:P025-10618898

3. 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机构的检测和试验过程进行审核，以验证检测和试验过程是否符合认可条件。机构应予以配合。

Within the validity of the approval certificate, the surveyor to the Society may pay unannounced audit to the inspection and testing process of the product in order to confirm whether it is in compliance with the approval conditions. The agency should provide an active cooperation and necessary for the surveyor.

4. 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，机构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 certificate, the agency should take corrective actions in a prompt and effective manner.

中国船级社重庆分社
CCS Chongqing Branch

注：本证书含有附页，共2页

Note: The certificate is attached with additional 2 page(s)

认可试验项目/Items of Test Approved

| 试验产品名称 Test of Product | 试验类别 Test Category | 试验项目 Test Items | 标准名称 Test Standards |
|--|--|--|---|
| 船用电气电子设备 Electrical and electronic installations in ships | 性能试验 Performance Test | 外观检查/Visual inspection | GD019:2.1 |
| | | 性能试验/Performance test (自动化、控制和测量仪表/Automation, control and instrumentation.) | GD019:2.2 |
| | | 绝缘电阻测量/Insulation resistance | GD019:2.3 |
| | | 能源波动试验 Power supply variations | GD019:2.4 IEC 61000-4-11 IEC 61000-4-29 |
| | | 能源故障试验/External power supply failure | GD019:2.5 IEC 61000-4-11 IEC 61000-4-29 IEC 61000-4-11 IEC 61000-4-29 |
| | | 耐电压试验 High Voltage Test | GD019:2.13 |
| | 环境条件试验 Environmental Test | 振动试验 Vibration | GD019:2.7 IEC60068-2-6 |
| | | 高温试验 Dry Heat | GD019:2.8 IEC60068-2-2 |
| | | 低温试验 Cold | GD019:2.9 IEC 60068-2-1 |
| | | 交变湿热试验 Damp Heat | GD019:2.10 IEC 60068-2-30 |
| | | 恒定湿热试验 Steady State Damp Heat | GD019:2.11 IEC 60068-2-78 |
| | | 外壳防护试验 Enclosure protection | GD019:2.12 IEC 60529 |
| | 电磁兼容试验 Electrical Magnetic Compatibility Test | 静电放电抗扰度 Electrostatic discharge immunity test | GD019:3.4 IEC 61000-4-2 |
| | | 射频电磁场辐射抗扰度试验 Radiated, radio-frequency electromagnetic field immunity test | GD019:3.5 IEC 61000-4-3 |
| | | 电快速瞬变脉冲群抗扰度试验 Electrical fast transient/burst immunity test | GD019:3.6 IEC 61000-4-4 |
| | | 浪涌抗扰度试验 Surge immunity test | GD019:3.7 IEC 61000-4-5 |
| | | 射频传导抗扰度 Immunity to conducted disturbances, induced by radio-frequency fields | GD019:3.9 IEC 61000-4-6 |

1. 适用标准/Test Standard:
2. GD019-2024 中国船级社《电气电子产品型式认可试验指南》/CCS Guidelines for Type Approval Test of Electric and Electronic Products

3. IEC 61000-4-11:2020/Cor2:2022 《电磁兼容 试验和测量技术 主电源每相电流 $\leq 16A$ 的设备的电压暂降、短时中断和电压变化的抗扰度试验》/Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current up to 16 A per phase
4. IEC 61000-4-29:2000 《电磁兼容 试验和测量技术 直流电源输入端口电压暂降、短时中断和电压变化的抗扰度试验》/Electromagnetic compatibility (EMC) - Part 4-29: Testing and measurement techniques; Voltage dips, short interruptions and voltage variations on d.c. input power port immunity tests
5. IEC 60068-2-6:2007 《环境试验---第 2-6 部分：试验方法---试验 Fc: 振动(正弦)》/Environmental testing - Part 2-6: Tests - Tests Fc: Vibration (sinusoidal)
6. IEC 60068-2-2:2007 《环境试验---第 2-2 部分：试验方法---试验 B: 高温》/Environmental testing - Part 2-2: Tests - Test B: Dry heat
7. IEC 60068-2-1:2007 《环境试验---第 2-1 部分：试验方法---试验 A: 低温》/Environmental testing - Part 2-1: Tests - Test A: Cold
8. IEC 60068-2-30:2005 《环境试验---第 2-30 部分：试验方法---试验 Db 交变湿热(12h+12h 循环)》/Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)
9. IEC 60068-2-78:2012 《环境试验---第 2-78 部分：试验方法---试验 Cab: 恒定湿热试验》/Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state
10. IEC 61000-4-2:2008 《电磁兼容 试验和测量技术 静电放电抗扰度试验》/Electromagnetic compatibility (EMC) - Part 4-2: Testing and measuring techniques - Electrostatic discharge immunity test
11. IEC 61000-4-3:2020 《电磁兼容 试验和测量技术 射频电磁场辐射抗扰度试验》/Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency electromagnetic field immunity test
12. IEC 61000-4-4:2012 《电磁兼容 试验和测量技术 电快速瞬变脉冲群抗扰度试验》/Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
13. IEC 61000-4-5:2014/A1:2017 《电磁兼容 试验和测量技术 浪涌(冲击)抗扰度试验》/Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test
14. IEC 61000-4-6:2023 《电磁兼容 试验和测量技术 射频场感应的传导骚扰抗扰度》/Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
15. IEC 60529:2013 《外壳防护等级(IP 代码)》/Degrees of protection provided by enclosures (IP Code)

*****本证书附页完/End of Additional Pages*****