



中国认可
国际互认
检测
TESTING
CNAS L2021



CEMT/QR-7.8-01-03-2020(1)

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No: 202303185

检 测 报 告

TEST REPORT

产 品 名 称

FR-4C环氧玻璃布层压板
FR-4C Epoxy Glass Cloth Laminated Sheet

Name of sample:

委 托 单 位

九江鑫星绝缘材料有限公司
JIUJIANG XINXING INSULATION MATERIAL
CO.,LTD

Client:

检 测 类 别

日常委托
Commission test

Classification of test:

桂林赛盟检测技术有限公司
机械工业电工材料产品质量监督检测中心
Guilin CEMT Technology Co., Ltd.
Electrical Materials Quality Supervision and
Testing Center of Machinery Industry of China

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桂林赛盟检测技术有限公司

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Declaration

1. This test report (including copy) is invalid if it is without the "Test Stamp".
2. The partial copy of this test report is invalid.
3. This test report is invalid without all the signatures of the chief surveyor, auditor and approver.
4. This test report is invalid if it is with any altering and rasure.
5. The test results shown this test report relate only to the received samples provided by the client.
6. In China, if this test report without CMA identification, it indicates that the data and results are only for the internal reference, no any social proof effect.

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产品名称 Name of sample	FR-4C环氧玻璃布层压板 FR-4C Epoxy Glass Cloth Laminated Sheet		
型号 Type	—	规格 Specifications	—
批号和/或生产日期 Lot and/or Manufacture No.	—	商标 Trademark	—
委托单位 Client	九江鑫星绝缘材料有限公司 地址: 江西省九江市濂溪区濂溪大道2号 JIUJIANG XINXING INSULATION MATERIAL CO.,LTD Add:No.2 Lianxi Road,Lianxi District,Jiujiang City,Jiangxi Province,China 332005 联系人/Contact: 骆训华/Xunhua Luo 电话/Tel: (0086)18970279478 邮箱/E-mail: 8160890@qq.com		
生产单位 Manufacturer	—		
以上信息及样品由委托方提供及确认, CEMT不承担证实委托方提供信息的准确性、适当性和(或)完整性的责任。 The above information and samples are provided and confirmed by the client. CEMT shall not be responsible for verifying the accuracy, appropriateness and/or completeness of the information provided by the client.			
接收样品状态 Received sample status	按标准要求制备的试样/Standard sample		
接样日期 Received sample date	2023-05-29	完成日期 Test completion date	2023-06-14
检测方法 Test method	GB/T 1303.2-2009		
检测结论/Test conclusions: 来样经检测, 仅给出实测值。 A sample of the product was tested, and the test results are only given the measured values.			
主检: Chief surveyor:	刘发远	审核: Auditor:	周和力
		签发日期: Issue Date:	2023-06-16
		批准: Approved by:	检验和用章

检测报告

TEST REPORT

产品名称/Name of sample : FR-4C环氧玻璃布层压板/FR-4C Epoxy Glass Cloth Laminated Sheet

序号 Item	检测性能/项目 Property	单位 Unit	要求 Requirement	检测结果 Test result	检测方法 Test method
1	垂直层向弯曲强度 (纵向) Flexural strength perpendicular to laminations(MD)	MPa	—	549	GB/T 1303.2-2009
2	平行层向简支梁冲击强度 (缺口, 纵向) Charpy impact strength parallel to laminations (Notched,MD)	kJ/m ²	—	63.3	
3	拉伸强度 (纵向) Tensile strength(MD)	MPa	—	399	
4	垂直层向电气强度 (90℃±2℃, 25#变压器油中, 20s逐级升压, Φ25mm/Φ75mm圆柱电极) Electric strength perpendicular to laminations (at 90℃±2℃ in 25# transformer oil, 20s step-by-step test, Φ25mm/Φ75mm cylindrical electrode)	kV/mm	—	20.0	
5	平行层向击穿电压 (90℃±2℃, 25#变压器油中, 20s逐级升压, Φ130mm/Φ130mm平板电极) Breakdown voltage parallel to laminations(at 90℃±2℃ in 25# transformer oil, 20s step-by-step test, Φ130mm/Φ130mm plate electrode)	kV	—	90.0	
6	相对电容率(1MHz) Relative Permittivity(1MHz)	—	—	4.84	
7	绝缘电阻 (锥销电极, 电极间距25mm) Insulation resistance(Taper pin electrodes, and the electrode spacing is 25.0 mm)	Ω	—	5.9×10 ¹⁴	
8	绝缘电阻 (浸水24h后, 锥销电极, 电极间距25mm) Insulation resistance(After 24h immersion in water, using taper pin electrodes, and the electrode spacing is 25.0 mm)	Ω	—	1.3×10 ¹⁴	

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序号 Item	检测性能/项目 Property	单位 Unit	要求 Requirement	检测结果 Test result	检测方法 Test method
9	相比电痕化指数 (CTI) Comparative tracking index(CTI)	—	—	CTI600	GB/T 1303.2-2009
10	密度 Density	g/cm ³	—	2.00	
11	燃烧性 (垂直法) Flammability(Vertical method)	级 Class	—	V-0	

备注/Remark:

- 第4项“垂直层向电气强度”试验试样的厚度为 (1.06~1.07) mm;
The thickness of the specimens for Item 4“Electric strength perpendicular to laminations” test are (1.06~1.07)mm.
- 第5项“平行层向击穿电压”试验试样的尺寸为 (100.08~100.22) mm (长) × (25.04~25.13) mm (宽) × (10.50~10.52) mm (厚), 电极间距为 (25.04~25.13) mm;
The sizes of the specimens for Item 5 “Breakdown voltage parallel to laminations”test are (100.08~100.22)mm (length)×(25.04~25.13)mm (width)×(10.50~10.52)mm (thickness). And the electrode spacing is (25.04~25.13)mm.
- 第11项“燃烧性 (垂直法)”试验试样尺寸为 (12.75~12.84) mm (宽) × (1.09~1.17) mm (厚);
The sizes of the specimens for Item 11“Flammability(Vertical method)” test are (12.75~12.84)mm(width)×(1.09~1.17)mm(thickness).
- 试验过程照片及曲线见图1~图9。
The pictures of the tests and curves are shown in Fig.1~Fig.9.

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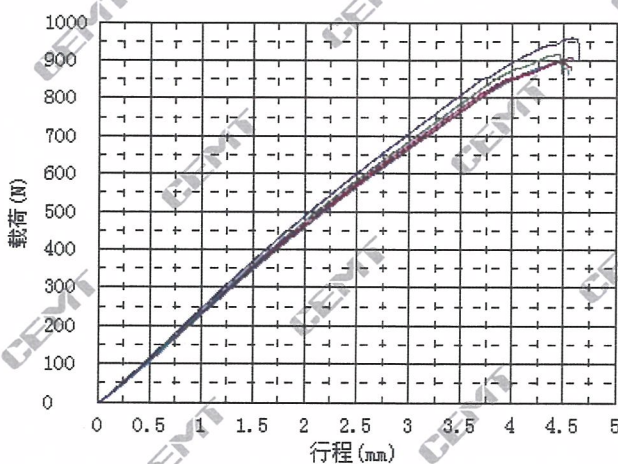
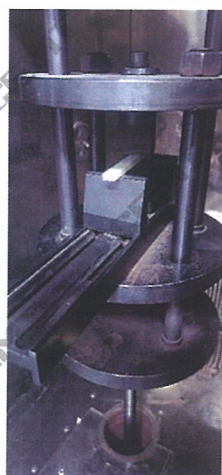


图1 垂直层向弯曲强度试验

Fig.1 Flexural strength perpendicular to laminations test



图2 平行层向简支梁冲击强度（缺口，纵向）试验

Fig.2 Charpy impact strength parallel to laminations (Notched, MD) test

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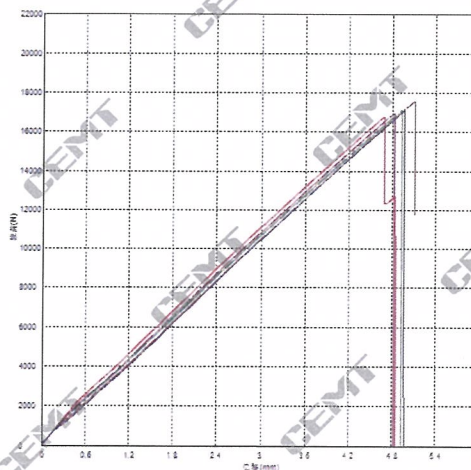


图3 拉伸强度试验
Fig.3 Tensile strength test

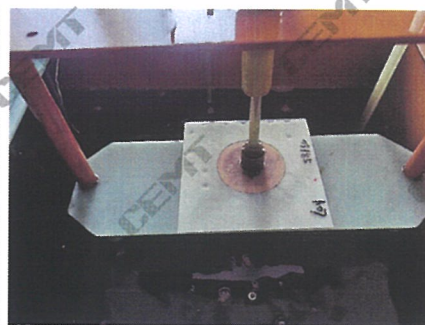


图4 垂直层向电气强度试验
Fig.4 Electric strength perpendicular to laminations test

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图5 平行层向击穿电压试验
Fig.5 Breakdown voltage parallel to laminations test



图6 相对电容率 (1MHz) 试验
Fig.6 Relative Permittivity(1MHz) test

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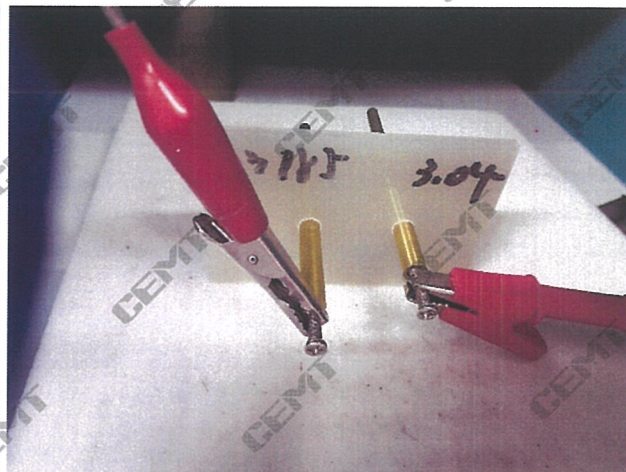


图7 绝缘电阻试验
Fig.7 Insulation resistance test

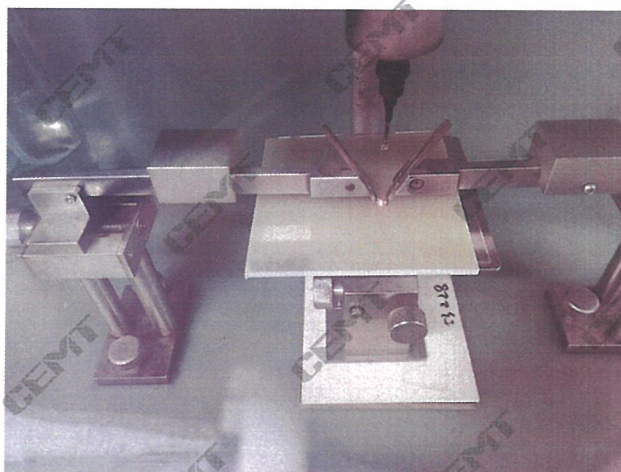


图8 相比电痕化指数 (CTI) 试验
Fig.8 Comparative tracking index(CTI) test

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图9 燃烧性（垂直法）试验
Fig.9 Flammability(VERTICAL method) test

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