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中国认可
国际互认
检测
TESTING
CNAS L0207

报告编号
Reference No

CT23-01769-1

检测报告

Test Report

样品名称
Name of sample

同心电缆
Concentric Cable

样品型号
Type of sample

ALUMINUM CONCENTRIC CABLE

委托方
Consigner

杭州益睿电线电缆有限公司
Hangzhou Easy Electric Wire and Cable Co., Ltd.

试验类型
Kind of test

委托试验
Commission Test

上海国缆检测股份有限公司

SHANGHAI NATIONAL CENTER OF TESTING AND INSPECTION
FOR ELECTRIC CABLE AND WIRE CO., LTD

国家电线电缆质量检验检测中心

CHINA NATIONAL CENTRE OF TESTING AND INSPECTION
FOR ELECTRIC CABLE AND WIRE



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检测报告

Shanghai National Center of Testing and Inspection for Electric Cable and Wire Co., Ltd
China National Centre of Testing and Inspection for Electric Cable and Wire
Test Report

共 5 页 第 1 页
Page 1 of 5

试验类型 Kind of test		委托检验 Commission Test		报告编号 Reference No.		CT23-01769-1	
样品名称 Name of sample		同心电缆 Concentric Cable					
型号规格 Type and Size		ALUMINUM CONCENTRIC CABLE 2×10mm ²		检测日期 Date of test		2023-05-25 ~ 2023-07-13	
委托方 Consigner	名称 Name	杭州益睿电线电缆有限公司 Hangzhou Easy Electric Wire and Cable Co., Ltd.					
	地址 Address	浙江省杭州市余杭区余杭街道凤新路380号2幢305室 Room 305, Building 2, No. 380 Fengxin Road, Hangzhou, China					
	电话号码 Tel.	19560490934	邮政编码 P.C.	311121	单位编号 Unit No.	057129	
生产单位 Manufacturer	名称 Name	杭州益睿电线电缆有限公司 Hangzhou Easy Electric Wire and Cable Co., Ltd.					
	地址 Address	浙江省杭州市余杭区余杭街道凤新路380号2幢305室 Room 305, Building 2, No. 380 Fengxin Road, Hangzhou, China					
	电话号码 Tel.	19560490934	邮政编码 P.C.	311121	单位编号 Unit No.	057129	
来样方式 Delivering mode		送样 Supplied by consigner	接收状态 Sample state at receiving	正常 Normal	收样日期 Receiving date	2023-05-04	
检测依据 Test standard		见第2页/See Page 2					
判定依据 Verdict standard		见第2页/See Page 2					
检测结论 Conclusion		<p>绝缘和护套的加速吸水和绝缘电阻试验仅提供检测结果；导体拉断力和导体直流电阻(20℃)符合委托方提供的技术要求；耐压试验试验符合ICEA S-65-658:2021的标准要求，绝缘老化前后机械性能符合UL 854: 2020的标准要求，其余所测项目符合UL 44: 2018的标准要求。</p> <p>The accelerated water absorption test of insulation and sheath and the insulation resistance test just provided the test results; the conductor resistance and the strength of the conductor complied with the requirements provided by the consigner; the voltage test complied with the requirements of ICEA S-65-658:2021; the mechanical properties before and after ageing in air oven of insulation complied with the requirements of UL 854: 2020; other items tested complied with the requirements of UL 44: 2018.</p>					
备注 Note		耐压试验参照ICEA S-65-658:2021标准中X-1绝缘AWG 7线规的试验要求进行。 Voltage test refer to X-1 insulated size AWG 7's requirement of ICEA S-65-658:2021.					
主检 Tested by	李娜 Li Na	审核 Checked by	杨立志 Yang Lizhi	批准 Approved by	肖继东 Xiao Jidong		
日期 Date	2023.7.13	日期 Date	2023.7.13	日期 Date	2023.7.13		

型号和规格 Type and size	ALUMINUM CONCENTRIC CABLE 2×10mm ²	报告编号 Reference No.	CT23-01769-1
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检测依据：
Test standard:

1. UL 2556:2015 电线电缆试验方法 Wire and Cable Test Methods
2. ASTM B 557-15 锻造和铸造的铝和铝镁合金产品拉伸试验方法 Standard Test Methods for Tension Testing Wrought and Cast Aluminum and Magnesium-Alloy Products
3. 参照 ICEA T-27-581-2016 挤包绝缘电力电缆、控制电缆、仪表电缆和移动用电缆测试方法 Standard Test Methods for Extruded Dielectric Power, Control, Instrumentation, and Portable Cables for Test

判定依据：
Verdict standard:

1. UL 854: 2020 引入电缆 Service-Entrance Cables
2. UL 44: 2018 热固性绝缘电线和电缆 Thermoset-Insulated Wires and Cables
3. ICEA S-95-658-2021 额定电压2000V及以下电力配电电缆 Power Cables Rated 2000V Volts or Less for the Distribution of Electrical Energy
4. 委托方提供的技术要求 Technical requirements provided by the consigner

型号和规格 Type and size		ALUMINUM CONCENTRIC CABLE 2×10mm ²		报告编号 Reference.No.	CT23-01769-1
序号 No.	检测项目 Test Items	单位 Unit	技术要求 Requirements	检测结果 Test Results	判定 Verdict
	受检绝缘线芯标志 inspected cores identification		/	黑black	N
1	电性能 Electrical requirements				
1.1	导体直流电阻 conductor D.C resistance (20℃)	MΩ/m	≤2.85	2.77	P
1.2	同心导体的导体直流电阻 concentric conductor D.C resistance (20℃)	MΩ/m	≤2.90	2.35	P
1.3	交流耐压试验 A.C voltage test (5.5kV,5min)		不击穿 no breakdown	未击穿 no breakdown	P
1.4	绝缘电阻 insulation resistance test(15℃)	GΩ·m	/	9.2×10 ⁵	N
1.5	绝缘加速吸水试验 Accelerated water absorption Test of insulation (75℃)				
1.5.1	介电常数 (浸水 24h 后) Dielectric constant (after immersed 24h)		/	2.9	N
1.5.2	电容增率 Increase in capacitance				
	— 1-14 天 day((C ₁₄ -C ₁)/C ₁)	%	/	7.7	N
	— 7-14 天 day((C ₁₄ -C ₇)/C ₇)	%	/	2.0	N
1.5.3	浸水 1 天与浸水 14 天后稳定因数变化 Stability factor difference between immersed 1day and 14days		/	0.18	N
1.6	护套 PVC 加速吸水试验 (同心导体与水间, 75℃) Accelerated water absorption Test of insulation (between the concentric conductor and water, 75℃)				

Note: "P" means this item does meet the requirement, "F" means this item does not meet the requirement, "N" means this item does not require verdict.

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序号 No.	检测项目 Test Items	单位 Unit	技术要求 Requirements	检测结果 Test Results	判定 Verdict
1.6.1	介电常数 (浸水 24h 后) Dielectric constant (after immersed 24h)		/	10.2	N
1.6.2	电容增率 Increase in capacitance				
	— 1-14 天 $\text{day}((C_{14}-C_1)/C_1)$	%	/	10	N
	— 7-14 天 $\text{day}((C_{14}-C_7)/C_7)$	%	/	1.8	N
1.6.3	浸水 1 天与浸水 14 天后稳定因数变化 Stability factor difference between immersed 1day and 14days		/	0.38	N
2	绝缘性能 INSULATION TEST REQUIREMENTS				
2.1	原始机械性能 Initial mechanical properties				
	— 抗张强度 tensile strength	MPa	≥10.3	20.0	P
	— 断裂伸长率 Ultimate elongation	%	≥150	560	P
2.2	空气箱老化试验 Mechanical properties after ageing in an air oven (121℃,168h)				
	— 抗张强度保留率 Percent of unaged value of tensile strength	%	≥70	92	P
	— 断裂伸长率保留率 Percent of unaged value of elongation at rupture	%	≥70	86	P
3	外护套性能 OVERSHEATH TEST REQUIREMENTS				
3.1	原始机械性能 Initial mechanical properties				
	— 抗张强度 tensile strength	MPa	≥10.3	17.9	P
	— 断裂伸长率 Ultimate elongation	%	≥100	276	P

Note: "P" means this item does meet the requirement, "F" means this item does not meet the requirement,
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序号 No.	检测项目 Test Items	单位 Unit	技术要求 Requirements	检测结果 Test Results	判定 Verdict
4	导体拉断力 strength of the conductor				
	— 导体拉断力 strength of conductors	N	720-1063	1012	P
	— 导体断裂伸长率 elongation at break of conductor	%	/	26	N
5	电缆燃烧试验 Cable flame test(VW-1)				
	— 标志旗损坏百分比 Percent of the indicator flag burned away or charred	%	≤25	0	P
	— 滴落物检查 Glowing particles or flaming drops		不引燃棉花 Shall not ignite the cotton	不引燃棉花 Not ignite the cotton	P
	— 每次供火后火焰自熄时间 time for flaming of the specimen to self- extinguish after the end of each application of the burner flame	s	≤60	0	P
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Note: "P" means this item does meet the requirement, "F" means this item does not meet the requirement, "N" means this item does not require verdict.