



中国认可  
国际互认  
检测  
TESTING  
CNAS L0207

报告编号  
Reference No

CT22-04266-2

# 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

# 上海国缆检测股份有限公司/国家电线电缆质量检验检测中心 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

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试验类型 Kind of test		委托检验 Commission Test		报告编号 Reference No.		CT22-04266-2	
样品名称 Name of sample		同心电缆 Concentric Cable					
型号规格 Type and Size		ALUMINUM CONCENTRIC CABLE 3×6AWG		检测日期 Date of test		2022-11-29 ~ 2023-01-28	
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	2022-11-17	
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试验仅提供检测结果；导体拉断力符合ASTM B801-18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 just provide the test results; the strength of the conductor complied with the requirements of ASTM B801-18; 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		/					
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	2023.1.29	日期 Date	2023.1.30	日期 Date	2023.1.30		

型号和规格 Type and size	ALUMINUM CONCENTRIC CABLE 3×6AWG	报告编号 Reference No.	CT22-04266-2
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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. 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线测试方法 Standard Test Methods for Extruded Dielectric Power, Control, Instrumentation, and Portable Cables for Test

判定依据：  
Verdict standard:

1. ASTM B801-18 用于后续包覆或绝缘的同心绞合 8000 系列铝合金导体标准规范 Standard Specification for Concentric-lay-Stranded Conductors of 8000 Series Aluminum Alloy for Subsequent Covering or insulation
2. UL 854: 2020 引入电缆 Service-Entrance Cables
3. UL 44: 2018 热固性绝缘电线和电缆 Thermoset-Insulated Wires and Cables

型号和规格 Type and size		ALUMINUM CONCENTRIC CABLE 3×6AWG		报告编号 Reference.No.	CT22-04266-2	
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		/	红Red	黑black	N
1	电性能 Electrical requirements					
1.1	导体直流电阻 conductor D.C resistance (20°C)	MΩ/m	≤2.21	2.12	2.13	P
1.2	同心导体的导体直流电阻 concentric conductor D.C resistance (20°C)	MΩ/m	≤2.21	1.86		P
1.3	交流耐压试验 A.C voltage test (3.5kV,60s)		不击穿 no breakdown	未击穿 no breakdown	未击穿 no breakdown	P
1.4	绝缘电阻 insulation resistance test(15°C)	GΩ · m	≥680	3.6×10 <sup>5</sup>	2.3×10 <sup>5</sup>	P
1.5	绝缘加速吸水试验 Accelerated water absorption Test of insulation (75°C)					
1.5.1	介电常数 (浸水 24h 后) Dielectric constant (after immersed 24h)		/	3.6	3.8	N
1.5.2	电容增率 Increase in capacitance					
	— 1-14 天 day((C <sub>14</sub> -C <sub>1</sub> )/C <sub>1</sub> )	%	/	-14	-14	N
	— 7-14 天 day((C <sub>14</sub> -C <sub>7</sub> )/C <sub>7</sub> )	%	/	-3	-3	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		/	0.50	-0.01	N
1.6	护套 PVC 加速吸水试验 (同心导体与水间, 75°C) Accelerated water absorption Test of insulation (between the concentric conductor and water, 75°C)					

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)		/	10.6		N
1.6.2	电容增率 Increase in capacitance					
	— 1-14 天 $\text{day}((C_{14}-C_1)/C_1)$	%	/	4.4		N
	— 7-14 天 $\text{day}((C_{14}-C_7)/C_7)$	%	/	2.0		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		/	1.3		N
2	<b>绝缘性能 INSULATION TEST REQUIREMENTS</b>					
2.1	原始机械性能 Initial mechanical properties					
	— 抗张强度 tensile strength	MPa	≥10.3	18.0	15.9	P
	— 断裂伸长率 Ultimate elongation	%	≥150	480	440	P
2.2	空气箱老化试验 Mechanical properties after ageing in an air oven (121°C,168h)					
	— 抗张强度保留率 Percent of unaged value of tensile strength	%	≥70	124	116	P
	— 断裂伸长率保留率 Percent of unaged value of elongation at rupture	%	≥70	117	123	P
3	<b>外护套性能 OVERSHEATH TEST REQUIREMENTS</b>					
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	300		P

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.

