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中国认可
国际互认
检测
TESTING
CNAS L0207

报告编号
Reference No

CT21-05440

检测报告

Test Report

样品名称 Name of sample	中压架空线 Medium Voltage Tree Wire
样品型号 Type of sample	25kV ABC 1/0 (AAAC/LDPE/HDPE)
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



地址：上海市宝山区真陈路888号 邮编：200444

电话：021-65493333 传真：021-65490171

电子邮箱：ewec@ticw.com.cn

报告查询网站：www.ticw.com.cn

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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样品名称 Name of sample		中压架空线 Medium Voltage Tree Wire					
型号规格 Type and Size		25kV ABC 1/0(AAAC/LDPE/HDPE)		检测日期 Date of test		2022-09-19 ~ 2022-11-23	
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.	15869274963	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.	15869274963	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	2021-12-23	
检测依据 Test standard		见第2页/See Page 2					
判定依据 Verdict standard		ANSI/ICEA S-121-733-2016, 承力支撑架空绝缘电缆标准 Standard For Tree Wire and Messenger Supported Spacer Cable					
检测结论 Conclusion		该样品所测项目符合 ANSI/ICEA S-121-733-2016 标准要求。 The items tested for the sample comply with the requirements of ANSI/ICEA S-121-733-2016.					
备注 Note		1.样品名称和型号规格由委托方提供。The name, type and size of the sample are provided by the consigner. 2.电性能试验项目(3.1和3.5项除外)在本中心试验基地-上海市杨浦区军工路1000号开展。 Electrical properties test items (Except for items 3.1 and 3.5) have been carried out at our test base—No. 1000, Jungong Road, Yangpu District, Shanghai.					
主检 Tested by	贺金红 He Jinhong	审核 Checked by	王子强 Wang Ziqiang	批准 Approved by	李闯 Li Chuang		
日期 Date	2022.11.24	日期 Date	2022.11.24	日期 Date	2022.11.24		

型号和规格 Type and size	25kV ABC 1/0(AAAC/LDPE/HDPE)	报告编号 Reference No.	CT21-05440
<p>检测依据： Test standard:</p> <ol style="list-style-type: none">1. ANSI/NEMA WC 53/ 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 Test2. UL 1581-2017 电线电缆和软线参考标准 Reference standard for electrical wires, cables, and flexible cords3. ANSI/ICEA S-94-649-2013 额定电压5kV到46kV同心中性导体电力电缆 Standard for concentric neutral cables rated 5 through 46kV4. IEC 60502-2: 2014 额定电压1kV($U_m=1.2kV$)到30kV($U_m=36kV$)挤包绝缘电力电缆及附件 第2部分：额定电压6kV($U_m=7.2kV$)到30kV($U_m=36kV$)电缆 Power cables with extruded insulation and their accessories for rated voltages from 1kV($U_m=1.2kV$) up to 30kV ($U_m=36kV$) Part 2: Cables for rated voltages from 6kV($U_m=7.2kV$) up to 30kV ($U_m=36kV$)			

型号和规格 Type and size		25kV ABC 1/0(AAAC/LDPE/HDPE)		报告编号 Reference No.	CT21-05440
序号 No.	检测项目 Test Items	单位 Unit	技术要求 Requirements	检测结果 Test Results	单项 评定 Verdict
1	结构 Construction				
1.1	导体 conductor				
	—单线根数 Number of wires		7	7	P
	—导体直径 Diameter of conductor	mm	10.1±2%	9.93	P
1.2	导体屏蔽 Conductor shield				
	—结构 Construction		挤包半导体层（导体与挤包半导体层间允许绕包半导体带） Extruded semi-conducting layer (A semi-conducting tape may be used between the conductor and the extruded shield)	挤包半导体层 A extruded semi-conducting layer	P
	—平均厚度 Average thickness	mm	/	0.8	N
	—最薄处厚度 Minimum thickness	mm	≥0.30	0.70	P
1.3	护层 Covering				
	—结构 Construction		双层护层 Two-layer covering	双层护层 A two-layer composite covering	P
	—平均厚度 Average thickness	mm	/		N
	—最薄处厚度 Minimum thickness	mm	≥5.72	6.69	P
	—同心度 Concentricity	%	≥85	97	P
1.4	电缆外径 Overall diameter of cable				
	—最大值 Maximum value	mm	/	25.5	N

注：“单项评定”符号含义，P：检测结果符合要求；F：检测结果不符合要求；N：检测结果不要求判定。

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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2	标志 Marking				
	-- 成品电缆表面标志 Marking on the surface of completed cable	/		CHINA EES CABLE 1/0 AWG AAAC 25kV HDPE Insulation	N
	-- 标志间距离 Distance between marking on the surface	mm	/	50	N
3	电性能试验 Electrical tests				
3.1	导体直流电阻 (25℃) DC conductor resistance(25℃)	mΩ/m	≤0.558	0.525	P
3.2	交流电压试验 AC Voltage test				
	— 12.5 kV, 5min		不击穿 No breakdown	未击穿 No breakdown	P
3.3	直流电压试验 DC Voltage test				
	—37.0kV, 5min		不击穿 No breakdown	未击穿 No breakdown	P
3.4	介电常数 (14.5kV) Dielectric constant (14.5kV)		≤3.5	2.2	P
3.5	体积电阻率 Volume resistivity				
3.5.1	导体屏蔽体积电阻率(75℃) Volume resistivity of non-metallic conductor shield(75℃)	Ω·m	≤1000	10.11	P
3.5.2	导体屏蔽体积电阻率(95℃) Volume resistivity of non-metallic conductor shield(95℃)	Ω·m	≤1000	59.75	P
4	内层护层机械物理性能 Mechanical properties of inner covering				
4.1	颜色 Colour		/	本色Original	N
4.2	老化前 Without ageing				

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4.3	--抗张强度 Tensile strength	N/mm ²	≥13.8	17.1	P
	--断裂伸长率 Elongation at break	%	≥300	728	P
	空气烘箱老化试验(100℃,48h) After ageing in air oven(100℃,48h)				
	--抗张强度保留率 Retention of tensile strength	%	≥75	101	P
	--断裂伸长率保留率 Retention of elongation at break	%	≥75	98	P
5	外层护层机械物理性能 Mechanical properties of outer covering				
5.1	颜色 Colour		/	黑色black	N
5.2	老化前 Without ageing				
5.3	--抗张强度 Tensile strength	N/mm ²	≥13.8	17.5	P
	--断裂伸长率 Elongation at break	%	≥300	698	P
	空气烘箱老化试验(100℃,48h) After ageing in air oven(100℃,48h)				
	--抗张强度保留率 Retention of tensile strength	%	≥75	106	P
	--断裂伸长率保留率 Retention of elongation at break	%	≥75	87	P
5.4	热变形试验(100℃,1h) Heat deformation test(100℃,1h)	%	≤30	18	P
6	外层护层耐日光老化试验(720h) Sunlight resistance test for outer insulation (720h) 老化前 Without ageing				

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	—抗张强度 Tensile strength	N/mm ² /		17.5	N
	—断裂伸长率 Elongation at rupture	% /		698	N
	老化后 After ageing				
	—抗张强度保留率 Retention of tensile strength	% ≥80		117	P
	—断裂伸长率保留率 Retention of elongation at rupture	% ≥80		137	P
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