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报告编号
Reference No



中国认可
国际互认
检测
TESTING
CNAS L0207

CT25-03985

检测报告 Test Report

样品名称
Name of sample

钢芯铝绞线

Aluminum Conductor Steel Reinforced

样品型号
Type of sample

ACSR

委托方
Consigner

河南庆州电缆有限公司

Henan Qingzhou 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	委托试验 Commission test	报告编号 Reference No.	CT25-03985		
样品名称 Name of sample	钢芯铝绞线 Aluminum Conductor Steel Reinforced				
型号规格 Type and Size	ACSR Kingbird 18+1×4.78mm		检测日期 Date of test	2025-09-01 ~ 2025-10-15	
委托方 Consigner	名称 Name	河南庆州电缆有限公司 Henan Qingzhou Cable Co., Ltd.			
	地址 Address	河南省巩义市竹林镇西工业园区 West Industrial Park, Zhulin Town, Gongyi City, Henan Province, China			
	电话号码 Tel.	0371-6117 6830	邮政编码 P.C.	/	单位编号 Unit No. 037129
生产单位 Manufacturer	名称 Name	河南庆州电缆有限公司 Henan Qingzhou Cable Co., Ltd.			
	地址 Address	河南省巩义市竹林镇西工业园区 West Industrial Park, Zhulin Town, Gongyi City, Henan Province, China			
	电话号码 Tel.	0371-6117 6830	邮政编码 P.C.	/	单位编号 Unit No. 037129
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	2025-08-25
检测依据 Test standard	IEC 61089:1991+A1:1997 圆线同心绞架空导线 IEC 61089:1991+A1:1997 Round wire concentric lay overhead electrical stranded conductors				
判定依据 Verdict standard	同检测依据 Same as test standard				
检测结论 Conclusion	该样品所测项目符合IEC 61089:1991+A1:1997标准要求。 The items tested for the sample comply with the requirements of IEC 61089:1991+A1:1997.				
备注 Note	1. 样品名称、型号规格及结构由委托方提供并负责，委托方要求按照 IEC 61089:1991+A1:1997标准中320-A1/S1A-18/1的要求进行判定； The consigner supplied name, type and size, structure of the sample, and is responsible for them, and requested to verdict according to 320-A1/S1A-18/1 in IEC 61089:1991+A1:1997; 2. 本报告中带“*”项目在本中心试验基地-上海市军工路1000号开展。 The items with “*” in this report were carried out at the test base of the center—No.1000, Jungong Road, Shanghai.				
主检 Tested by	徐睿 Xu Rui	审核 Checked by	吴旻 Wu Min	批准 Approved by	王煦 Wang Xu
日期 Date	2025.10.20	日期 Date	2025.10.21	日期 Date	2025.10.21

型号和规格 Type and size		ACSR Kingbird 18+1×4.78mm		报告编号 Reference No.	CT25-03985
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 Structure and size				
1.1	铝线根数 Number of Al wires	根 No.	18	18	P
1.2	钢线根数 Number of steel wires	根 No.	1	1	P
2	绞线直径 Diameter of the conductor	mm	23.9±0.2	24.0	P
3	截面积 Cross-sectional area				
3.1	铝 Al	mm ²	323±6	322	P
3.2	钢 Steel	mm ²	/	17.7	N
3.3	总和 Total	mm ²	/	340	N
4	表面质量 Surface quality		表面不应有肉眼可见的缺陷,如明显的压痕、划痕等,并不得有与良好商品不相称的任何缺陷。 The conductor shall be free all imperfection visible to the unaided eye (normal corrective lenses accepted) , such as nicks, indentations, etc., not consistent with good commercial practice.	通过 Pass	P
5	绞制 Lay				
5.1	绞向 Direction of lay		相邻层绞向应相反,最外层绞向应为右向。 Adjacent wire layers shall be stranded with reverse lay directions, the direction of lay of the external layer shall be "right-hand".	相反,右向 Reverse, "right-hand"	P
5.2	均匀紧密性 Inertness		每层单线应均匀紧密地绞合在下层中心线芯或内绞层上;在切断绞线后,所有单线都不松股或容易用手复位。 The wires in each layer shall be evenly and closely stranded around the underlying wire or wires; where the core is cut, the wires shall remain in position or be readily replaced by hand and then remain approximately in position.	均匀紧密,未松散 Evenly and Closely	P
3	节径比 Lay ratio		任何层的节径比应不大于其紧邻内层的节径比。 Lay ratio of every layer should not more than the close inner one.	通过 Pass	P

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 to the verdict.

型号和规格 Type and size		ACSR Kingbird 18+1×4.78mm		报告编号 Reference No.	CT25-03985
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
5.3.1	内层 Inner layer		10~16	15.2	P
5.3.2	外层 Outer layer		10~14	12.3	P
5.1	钢线性能 (绞后) Properties of steel wires (stranded)				
5.1	直径 Diameter	mm	4.78±0.07	4.75	P
5.2	抗拉强度 Tensile strength	MPa	≥1226 (1290×0.95)	1505	P
5.3	1%伸长时的应力 Stress at 1% extension	MPa	≥1100	1233	P
5.4	断后伸长率 (L ₀ =200mm) Elongation after fracture (L ₀ =200 mm)	%	≥4.0	4.8	P
5.5	扭转 (100d) Torsion (100d)	次 No.	≥12	17	P
5.6	卷绕 (1d8 圈) Wrapping (1d 8 turns)		应不断裂 No fracture shall occur	未断裂 No fracture occurred	P
5.7	镀锌层 Zinc coating				
5.7.1	锌层重量 Mass of zinc coating	g/m ²	≥290	423	P
5.7.2	锌层附着性 (5d, 8 圈) Adherence of coating (5d, 8 circles)		镀锌层应紧密附着在钢线上, 不能有破裂或剥落的现象, 以至于用手指摩擦锌层便会掉落。 The zinc shall remain firmly adherent to the steel and shall not crack or flake to such an extent that any flakes of zinc can be removed by rubbing with bare fingers.	未开裂, 未起皮。 No cracking, no flaking.	P
6.7.3	锌层连续性 Continuity of zinc coating		用肉眼观察镀锌层应没有孔隙, 镀锌层应光洁, 厚度均匀。 There shall be no voids in the coating visibly examined by eyes. The coating shall be smooth and its thickness shall be uniform.	无孔隙, 光洁, 均匀 No voids. Smooth and uniform.	P

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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		单项评定 Verdict
7	铝线性能 (绞后) Properties of Al wires (stranded)					
7.1	直径 Diameter					
7.1.1	内层 Inner layer	mm	4.78±0.05	4.77		P
7.1.2	外层 Outer layer	mm	4.78±0.05	4.77 4.77		P
7.2	抗拉强度 Tensile strength					
7.2.1	内层 Inner layer	MPa	≥152 (160×0.95)	166		P
7.2.2	外层 Outer layer	MPa	≥152 (160×0.95)	169 165		P
7.3	20℃时直流电阻率 DC resistivity at 20℃					
7.3.1	内层 Inner layer	nΩ·m	≤28.264	27.878		P
7.3.2	外层 Outer layer	nΩ·m	≤28.264	27.800 27.795		P
7.4	卷绕 (1d 卷绕 8 圈, 退 6 圈, 再 紧密卷绕。) Wrap (1d winds 8 circles, returns 6 circles, once closely wind.)		不断裂 No fracture shall occur	未断裂 No fracture occurred		P
8	铝线接头强度 (冷压焊) Tensile strength of joints in Al wires (cold-pressure welding)	MPa	≥130	161		P
9	绞线单位长度质量 Mass per unit length of the conductor	kg/km	1029.3±20.6	1019.7		P
10	绞线20℃直流电阻 DC resistance of the conductor at 20℃	Ω/km	≤0.0892	0.0870		P
11	绞线综合拉断力* Breaking strength of the conductor*	kN	≥67.85 (71.42×0.95)	70.11		P
以下空白 End of report						

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