



中国认可  
国际互认  
检测  
TESTING  
CNAS L0207



160008220369

报告编号  
Reference No

CT20-02000

# 检测报告

## Test Report

样品名称  
Name of sample

Aluminum conductor steel reinforced

样品型号  
Type of sample

/

委托方  
Consigner

HANGZHOU EASY ELECTRIC WIRE AND CABLE  
CO., LTD

试验类型  
Kind of test

Commission test

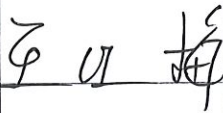
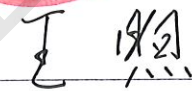
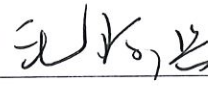
国家电线电缆质量监督检验中心

CHINA NATIONAL CENTRE FOR QUALITY  
SUPERVISION AND TEST OF ELECTRIC WIRE AND CABLE



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China National Centre for Quality Supervision and Test of Electric Wire and Cable  
Test Report

Kind of test	Commission test	Reference No.	CT20-02000		
Name of sample	Aluminum conductor steel reinforced				
Type and Size	95/15	Date of test	2020-04-20~2020-04-29		
Consigner	Name	HANGZHOU EASY ELECTRIC WIRE AND CABLE CO., LTD			
	Address	Room B415, Future Technology Park, No.7 Long Tan Road Hangzhou, CHINA			
	Tel.	158 6927 4963	P.C.	/	Unit No. 057129
Manufacturer	Name	HANGZHOU EASY ELECTRIC WIRE AND CABLE CO., LTD			
	Address	Room B415, Future Technology Park, NO.7 Long Tan Road Hangzhou, CHINA			
	Tel.	158 6927 4963	P.C.	/	Unit No. 057129
Delivering mode	Supplied by consigner	Sample state at receiving	Normal	Receiving date	2020-04-17
Test standard	IEC 61089:1991+A1:1997 Round wire concentric lay overhead electrical stranded conductors				
Verdict standard	1. Technical specification supplied by consigner 2. IEC 61089:1991+A1:1997 Round wire concentric lay overhead electrical stranded conductors				
Conclusion	The items tested for the sample comply with the requirements of technical specification supplied by consigner and IEC 61089:1991+A1:1997.				
Note	1. Name, type and size of the sample are supplied by consigner; 2. Consigner requests to verdict according to the requirements of A1/S1A in IEC 61089:1991+A1:1997				
Tested by	Wang HongMei 	Checked by	Wang Xu 	Approved by	Mao AXing 
Date	2020.4.29	Date	2020.4.30	Date	2020.4.30

Type and size		95/15		Reference No.	CT20-02000	
No.	Test Items	Unit	Requirements	Test Results	Verdict	
1	Structure					
1.1	Number of Al wires	No.	26	26	P	
1.2	Number of steel wires	No.	7	7	P	
2	Conductor diameter	mm	13.6±0.1	13.6	P	
3	Cross-sectional area					
3.1	Steel	mm <sup>2</sup>	/	15.0	N	
3.2	Aluminium	mm <sup>2</sup>	94.4±1.9	95.5	P	
3.3	Total	mm <sup>2</sup>	/	110.5	N	
4	Surface		The surface of the conductor shall be free from all imperfections visible to the unaided eye, such as nicks, indentations, etc., not consistent with good commercial practice.	Pass	P	
5	Lay					
5.1	Direction of lay		Adjacent wire layers shall be stranded with reverse lay directions, the direction of lay of the external layer shall be "right-hand".	Reverse, "right-hand"	P	
5.2	Inertness		The wires in each layer shall be evenly and closely stranded around the underlying wire or the core; where the conductor is cut, the wires shall remain in position or be readily replaced by hand and then remain approximately in position.	Evenly and Closely	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 to the verdict.





Type and size		95/15		Reference No.	CT20-02000	
No.	Test Items	Unit	Requirements	Test Results		Verdict
5.3	Lay ratio		Lay ratio of every layer should not more than the close inner one.	Pass		P
5.3.1	Steel core layer		16~26	16.4		P
5.3.2	Al wires layer					
5.3.2.1	Inner layer		10~16	15.6		P
5.3.2.2	Outer layer		10~14	13.1		P
6	Properties of Steel wires (stranded)					
6.1	Diameter					
6.1.1	Core wire	mm	$1.67 \pm 0.03$	1.66		P
6.1.2	6-wire layer	mm	$1.67 \pm 0.03$	1.64	1.65	P
6.2	Tensile strength					
6.2.1	Core wire	MPa	$\geq 1273$ ( $1340 \times 0.95$ )	1551		P
6.2.2	6-wire layer	MPa	$\geq 1273$ ( $1340 \times 0.95$ )	1573	1564	P
6.3	Stress at 1% extension	MPa	$\geq 1170$	1469		P
6.4	Elongation after fracture ( $L_0=250$ mm)	%	$\geq 3.0$	5.3		P
6.5	Torsion(100d)	No.	$\geq 18$	34		P
6.6	Wrapping test (1d, 8turns)		The wire shall not break.	No breakage occurred.		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 to the verdict.

Type and size		95/15		Reference No.	CT20-02000	
No.	Test Items	Unit	Requirements	Test Results		Verdict
6.7	Zinc coating					
6.7.1	Mass of zinc coating	g/m <sup>2</sup>	≥200	202		P
6.7.2	Adherence (4d, 8turns)		The zinc coating shall not crack nor flake to such an extent that any zinc can be removed by rubbing with bare fingers.	No cracking, no flaking		P
6.7.3	Continuity		There shall be no voids in the coating, the zinc coating shall be reasonably smooth, uniform thickness.	Smooth and uniform.		P
7	Properties of Al wires (stranded)					
7.1	Diameter					
7.1.1	Inner layer	mm	2.15±0.03	2.17		P
7.1.2	Outer layer	mm	2.15±0.03	2.16	2.16	P
7.2	Tensile strength					
7.2.1	Inner layer	MPa	≥171 (180×0.95)	212		P
7.2.2	Outer layer	MPa	≥171 (180×0.95)	214	194	P
7.3	DC resistivity at 20°C					
7.3.1	Inner layer	nΩ·m	≤28.264	28.09		P
7.3.2	Outer layer	nΩ·m	≤28.264	28.04	28.16	P
7.4	Wrapping test (1d winds 8 circles, returns 6 circles, once closely wind.)		The wire shall not break.	No breakage occurred.		P
8	Mass per unit length of the Conductor	kg/km	380.2±7.6	377.7		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 to the verdict.