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中国认可  
国际互认  
检测  
TESTING  
CNAS L0207

报告编号

CT21-03176

Reference No

# 检测报告

## Test Report

样品名称 Concentric-Lay-Stranded Aluminum Conductors,  
Name of sample Aluminum-Alloy Reinforced

样品型号 ACAR ASTM B524 ACAR  
Type of sample

委托方 HANGZHOU EASY ELECTRIC WIRE AND CABLE  
Consigner CO., LTD

试验类型 Commission test  
Kind of 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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Type and size	ACAR ASTM B524 ACAR-1250MCM-48/13	Reference No.	CT21-03176		
No.	Test Items	Unit	Requirements	Test Results	Verdict
1	Structure size				
1.1	Number of Al wires	No.	48	48	P
1.2	Number of Al alloy wires	No.	13	13	P
2	Conductor diameter	mm	/	32.74	N
3	Surface quality		The conductor shall be free of all imperfections not consistent with good commercial practice	Pass	P
4	Lay				
4.1	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
4.2	Lay ratio		Lay ratio of every layer, should not more than the close inner one.		P
4.2.1	Inner layer		10~16	15.4	P
4.2.2	Adjacent inner layer		10~16	12.4	P
4.2.3	Adjacent outer layer		10~16	12.2	P
4.2.4	Outer layer		10~16	10.9	P
5	The properties of Al alloy wire (Stranded)				
5.1	Appearance		The wire shall be free of all imperfections not consistent with good commercial practice.	Pass	P
5.2	Diameter	mm	$3.635 \pm 0.036$	3.633	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		ACAR ASTM B524 ACAR-1250MCM-48/13		Reference No.	CT21-03176	
No.	Test Items	Unit	Requirements	Test Results	Verdict	
5.3	Tensile strength					
5.3.1	Average for a Lot	MPa	$\geq 299$ ( $315 \times 0.95$ )	341	P	
5.3.2	Individual tests	MPa	$\geq 290$ ( $305 \times 0.95$ )	328	P	
5.4	Elongation after fracture ( $L_0=250$ mm) (Individual test)	%	$\geq 3.0$	5.4	P	
5.5	DC resistivity at 20°C	$\Omega \cdot \text{mm}^2/\text{m}$	$\leq 0.032841$	0.031930	P	
5.6	Bending(looped around its own diameter with a mandrel)		No fracture shall occur.	No fracture occurred.	P	
6	Properties of Al wires (stranded)					
6.1	Appearance		The wire shall be free of imperfections not consistent with good commercial practice.	Pass	P	
6.2	Diameter	mm	$3.635 \pm 0.036$	3.636	P	
6.3	Tensile strength					
6.3.1	Average for a Lot	MPa	$\geq 162$ ( $170 \times 0.95$ )	184	P	
6.3.2	Individual tests	MPa	$\geq 152$ ( $160 \times 0.95$ )	175	P	
6.4	Elongation after fracture ( $L_0=250$ mm)					
6.4.1	Average for a Lot	%	$\geq 1.9$	2.0	P	
6.4.2	Individual tests	%	$\geq 1.8$	2.0	P	

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Type and size		ACAR ASTM B524 ACAR-1250MCM-48/13		Reference No.		CT21-03176	
No.	Test Items	Unit	Requirements	Test Results	Verdict		
6.5	DC resistivity at 20°C						
6.5.1	Average for a Lot	$\Omega \cdot \text{mm}^2/\text{m}$	$\leq 0.028172$	0.028063	P		
6.5.2	Individual tests	$\Omega \cdot \text{mm}^2/\text{m}$	$\leq 0.028265$	0.028160	P		
6.6	Bending(looped around its own diameter with a mandrel)		No fracture shall occur.	No fracture occurred.	P		
End of Report							

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.