

FISEND 孚信达双金属

Test report on the bending performance of 30% volume ratio copper-aluminum alloy composite flat wire

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Sample Name	Copper-aluminum alloy composite flat wire
Product Specifications	16mm x 3mm (width x thickness)
Material grade	T2/8030
Test start time:	2024-08-13
Test end time:	2024-08-14
Test Results	Please see the next page (unless otherwise specified, this report is only responsible for the results of copper-aluminum alloy composite flat wire).

Yantai Fuxinda Bimetallic Co., Ltd.

Authorized Signature

仲维仁

Zhong Weiren

Authorized signatory

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Summary of results:

Serial Number	Test Project	Test methods	result	in conclusion
1.	Bending of copper-aluminum alloy composite flat wire Metallic Materials	GB/T 232-2010 Test Method for Bending Properties of	The cladding layer showed no cracks or bubbles, and there were no pores or cracks near the interface at the bending points. The cladding layer did not separate from the aluminum core.	/

Note: Pass: Meets requirements

Unqualified: Does not meet requirements

/: No judgment made

Original photo:



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Test item: Bending performance test of copper-aluminum alloy composite strip

Sample Description: Metal Part

Test method: GB/T 232-2010 "Metallic materials, bending test method"

Test conditions:

Take 7 pieces of 16x3x200mm copper-aluminum alloy flat wire with a 30% volume ratio and bend them according to the following requirements:

1. Maximum bending angle: 90°; 1.5x, 1.0x, 0.8x, 0.6x

2. Maximum bending angle: 90° vertical bend; 1.0x, 0.8x, 0.6x

After bending, the bent area was cut open and observed under a metallographic microscope at magnifications of 50x, 100x, and 200x.

Requirements: The cladding layer should not have cracks or bubbles, there should be no holes or cracks near the interface of the curved part, and the cladding layer should not separate from the aluminum core.

Test results:

Test Project	Test Results	In conclusion
The 16x3 copper-aluminum alloy composite flat wire showed no cracks, bubbles, or holes at the 1.5x bend, and the aluminum core remained intact.		Passed
The 16x3 copper-aluminum alloy composite flat wire showed no cracks, bubbles, or holes at the 1.0x bend, and the aluminum core remained intact.		Passed
No cracks, bubbles, or holes were found at the 0.8x bend of the 16x3 copper-aluminum alloy composite flat wire, and the aluminum core showed no separation.		Passed
No cracks, bubbles, or holes were found at the 0.6x bend of the 16x3 copper-aluminum alloy composite flat wire, and the aluminum core showed no separation.		Passed
No cracks, bubbles, or holes were found at the 1.0x bend of the 16x3 copper-aluminum alloy composite flat wire, and the aluminum core showed no separation.		Passed
No cracks, bubbles, or holes were found at the 0.8x bend of the 16x3 copper-aluminum alloy composite flat wire, and the aluminum core showed no separation.		Passed
No cracks, bubbles, or holes were found at the 0.6x bend of the 16x3 copper-aluminum alloy composite flat wire, and the aluminum core showed no separation.		Passed

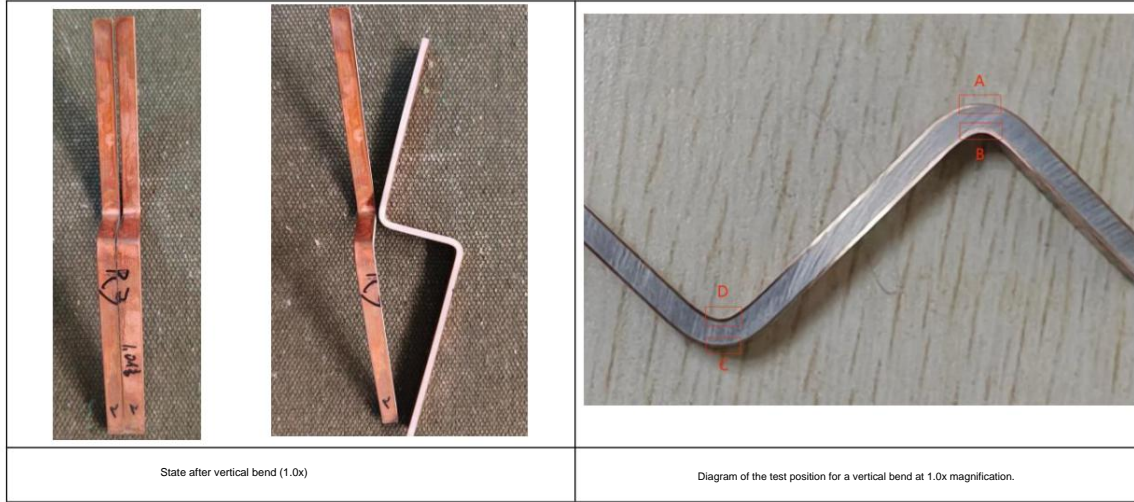
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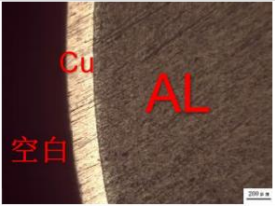
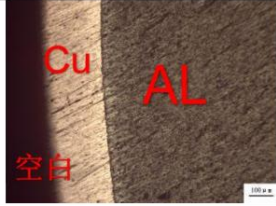
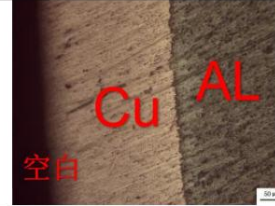



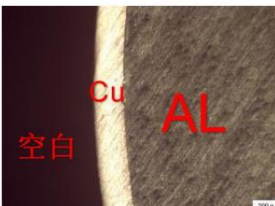





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1. Copper-aluminum alloy composite flat wire vertical bending 1.0 times



Metallographic measurement test position	Metallographic photographs at different magnifications			judgement
	1X50	1X100	1X200	
A				Passed
B				Passed
C				Passed
D				Passed

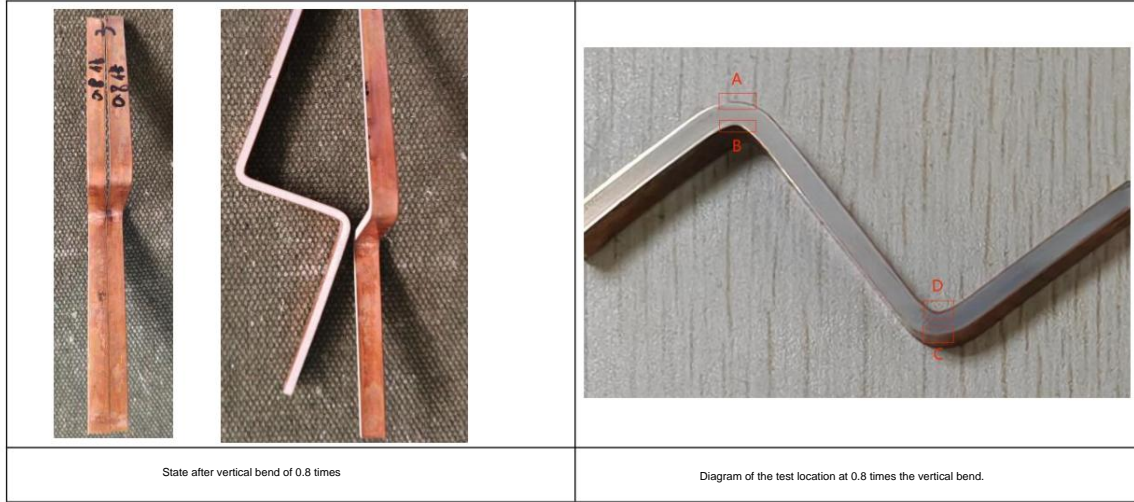
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2. Copper-aluminum alloy composite flat wire vertical bending 0.8 times



Metallographic measurement test position	Metallographic photographs at different magnifications			judgement
	1X50	1X100	1X200	
A				Passed
B				Passed
C				Passed
D				Passed

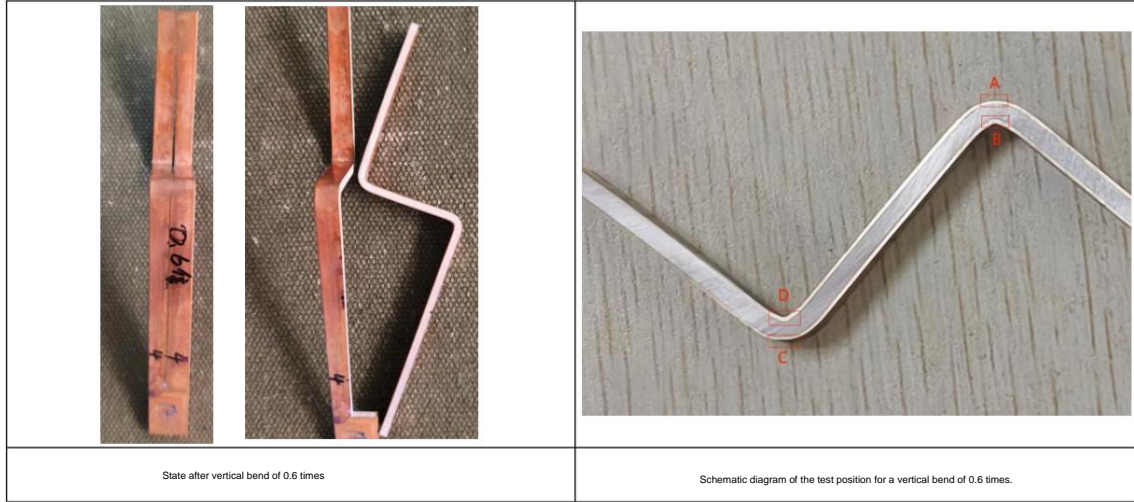
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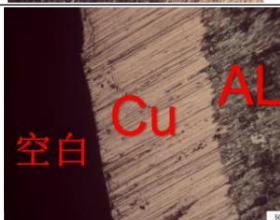
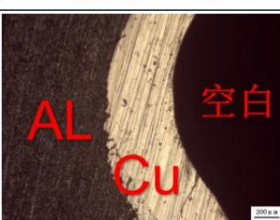
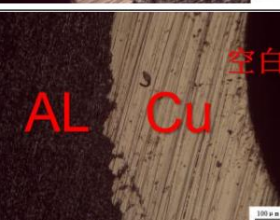

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3. Copper-aluminum alloy composite flat wire vertical bending 0.6 times



Metallographic measurement test position	Metallographic photographs at different magnifications			judgement
	1X50	1X100	1X200	
A				Passed
B				Passed
C				Passed
D				Passed

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4. Copper-aluminum alloy composite flat wire, flat bending 1.5 times.



State after 1.5 times bending of flat bend

Schematic diagram of the 1.5x test position for horizontal bending.

Metallographic measurement test position	Metallographic photographs at different magnifications			judgement
	1X50	1X100	1X200	
A				Passed
B				Passed

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5. Copper-aluminum alloy composite flat wire, flat bending 1.0 times.



Metallographic measurement test position	Metallographic photographs at different magnifications			judgement
	1X50	1X100	1X200	
A				Passed
B				Passed

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6. Copper-aluminum alloy composite flat wire, flat bending ratio 0.8 times.



Metallographic measurement test position	Metallographic photographs at different magnifications			judgement
	1X50	1X100	1X200	
A				Passed
B				Passed

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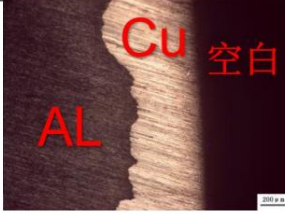


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7. Copper-aluminum alloy composite flat wire, flat bending ratio 0.6 times.



Metallographic measurement test position	Metallographic photographs at different magnifications			judgement
	1X50	1X100	1X200	
A				Passed
B				Passed

*****Report End*****