

## TEST REPORT

Report No.: MU181224005E-03-R1

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Customer..... : Yantai Fisend Bimetal Co., Ltd.  
Address..... : NO. 575, Wuwu Road, Muping District, Yantai City, Shandong Province  
Sample name..... : CCA busbar/CCA busba  
Sample model..... : /  
Sample description.... : manufacturer: Yantai Fisend Bimetal Co., Ltd.  
Sample No..... : U181224013-01~02/U181224014-01~02  
Amount of Sample.... : 2pcs  
Sample Received Date : Dec.24.2018  
Completion Date..... : Feb.26.2019  
Report Issue Date .... : Mar.12.2019

### Test Information:

No.	Item(s)	Test Result
1	Resistivity (Before thermal shock)	See Appendix 2
2	Thermal shock test	See Appendix 3
3	Resistivity (After thermal shock)	See Appendix 4



Testing: Sean Hua

Inspected: Baron

Approved: Jacky

Verification code: MJU8D

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## Appendix 1

### Sample Photos:

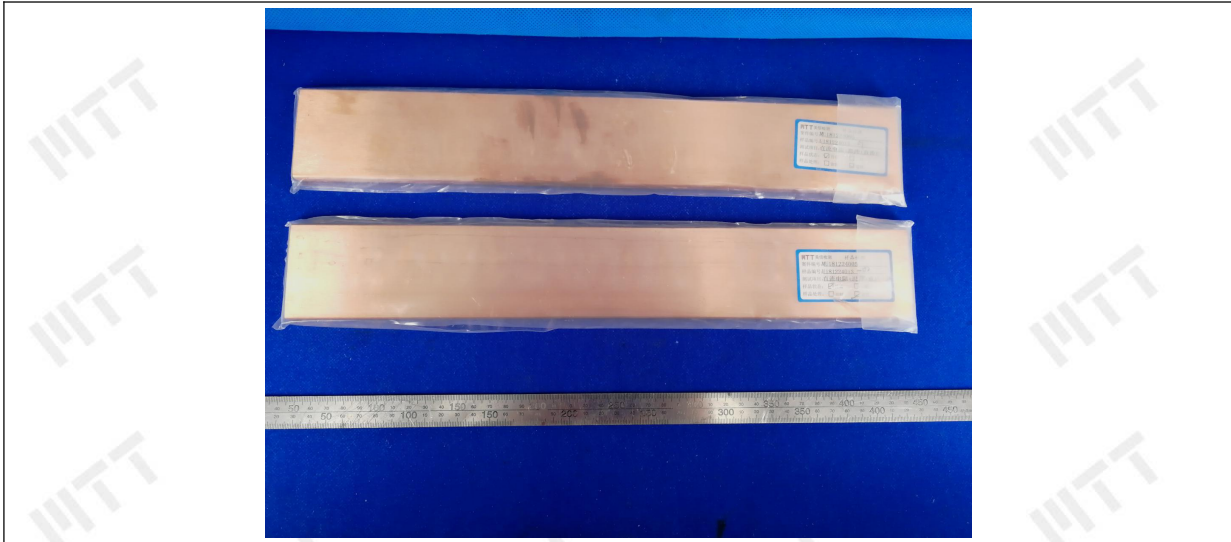


Figure 1. The photo of sample U181224013-01~02 (Before thermal shock and After thermal shock)



Figure 2. The photo of sample U181224014-01~02 before test

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## Appendix 2

**Test Item: Resistivity (Before thermal shock)****1. Environment Condition:**

Temperature: 23.5°C; Relative humidity: 48%R.H

**2. Test Sample:**

Sample No.	Sample name	Sample model	Sample photo	Sample Num.
U181224013-01~02	CCA busbar	/	See Appendix 1	2pcs

**3. Test Equipments:**

No.	Name	Model No.
1	Digital conductivity meter	Sigma 2008B

**4. Testing Standard:**

GB/T 3048.2-2007 Test methods for electrical properties of electric cables and wires. Part 2:Test of electrical resistivity of metallic materials

**5. Test Condition:**

Frequency:60kHz

**6. Test Result:**

Sample No.	Test Result ( $\Omega \cdot \text{mm}^2/\text{m}$ )	
U181224013-1	1	0.02466
	2	0.02473
	3	0.02479
	Ave.	0.02473
U181224013-2	1	0.02468
	2	0.02481
	3	0.02468
	Ave.	0.02472

Remarks: The copper-clad aluminum coating volume ratio of 30% is provided by the customer.

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## Appendix 3

**Test Item: Thermal shock test****1. Environment Condition:**

Temperature: 23.1°C ; Relative humidity: 50%RH

**2. Test Sample:**

Sample No.	Sample name	Sample model	Sample photo	Sample Num.
U181224014-01~02	CCA busbar	/	See Appendix 1	2pcs

**3. Test Equipments:**

No.	Name	Model No.
1	Thermal shock test chamber	AZTS200U-2T

**4. Testing Standard:**

According to customer requirements

**5. Test Condition:**

Low temperature: -55°C/10min

High temperature: 150°C/10min

Duration of rearrangement: &lt;10s

Cycles: 1000

Thermal shock mode: from low temperature to high temperature.

**6. Test Result:**

Sample No.	Test Result
U181224014-01~02	There is obvious discoloration on the surface of samples after test.

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## 7. Test Photos:



Figure 3.The photo of sample U181224014-01~02 during test



Figure 4.The photos of sample U181224014-01~02 test curve

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Figure 5. The photos of sample U181224014-01~02 after test

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## Appendix 4

**Test Item: Resistivity (After thermal shock)****1. Environment Condition:**

Temperature: 23.2°C ; Relative humidity: 51%R.H

**2. Test Sample:**

Sample No.	Sample name	Sample model	Sample photo	Sample Num.
U181224013-01~02	CCA busbar	/	See Appendix 1	2pcs

**3. Test Equipments:**

No.	Name	Model No.
1	Digital conductivity meter	Sigma 2008B

**4. Reference Standard:**

GB/T 3048.2-2007 Test methods for electrical properties of electric cables and wires. Part 2:Test of electrical resistivity of metallic materials

**5. Test Condition:**

Frequency:60kHz

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**6.^ Test Result:**

Sample No.	Test Result ( $\Omega \cdot \text{mm}^2/\text{m}$ )	
U181224013-1	1	0.02468
	2	0.02473
	3	0.02479
	Ave.	0.02473
U181224013-2	1	0.02464
	2	0.02471
	3	0.02468
	Ave.	0.02468

Remarks: The copper-clad aluminum coating volume ratio of 30% is provided by the customer.

**Annotations:** “^”Indicates that this information has been modified.

\*\*\* End of Report \*\*\*

The data results in this report are used for the purpose of corporate internal product research and development, quality control, scientific research, teaching, etc. This report is considered invalidated without the Special Seal for Inspection of the Meixin Testing. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of Meixin

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Remark: This report instead of the original report, the original report number MS181224005E-03.