

## TEST REPORT

Report No.: MU181224005E-02

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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  
Sample model..... : /  
Sample description.... : manufacturer: Yantai Fisend Bimetal Co., Ltd.  
Sample No..... : U181224012-01~02/U181224014-01~02  
Amount of Sample.... : 2pcs  
Sample Received Date : Dec.24.2018  
Completion Date..... : Feb.21.2019  
Report Issue Date .... : Mar.04.2019

### Test Information:

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



Testing: Sean Hua

Inspected: Baron

Approved: Jacky

Verification code: MJU8D

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## Appendix 1

### Sample Photos:

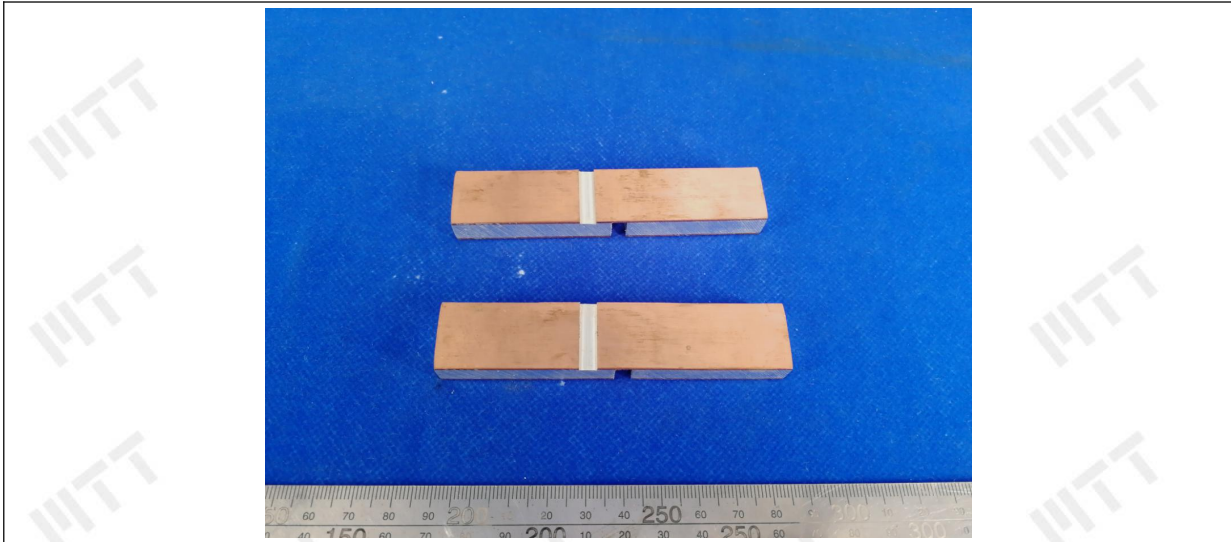


Figure 1. The sample preparation photo of sample U181224012-01~02 before shear strength test (Before thermal shock)

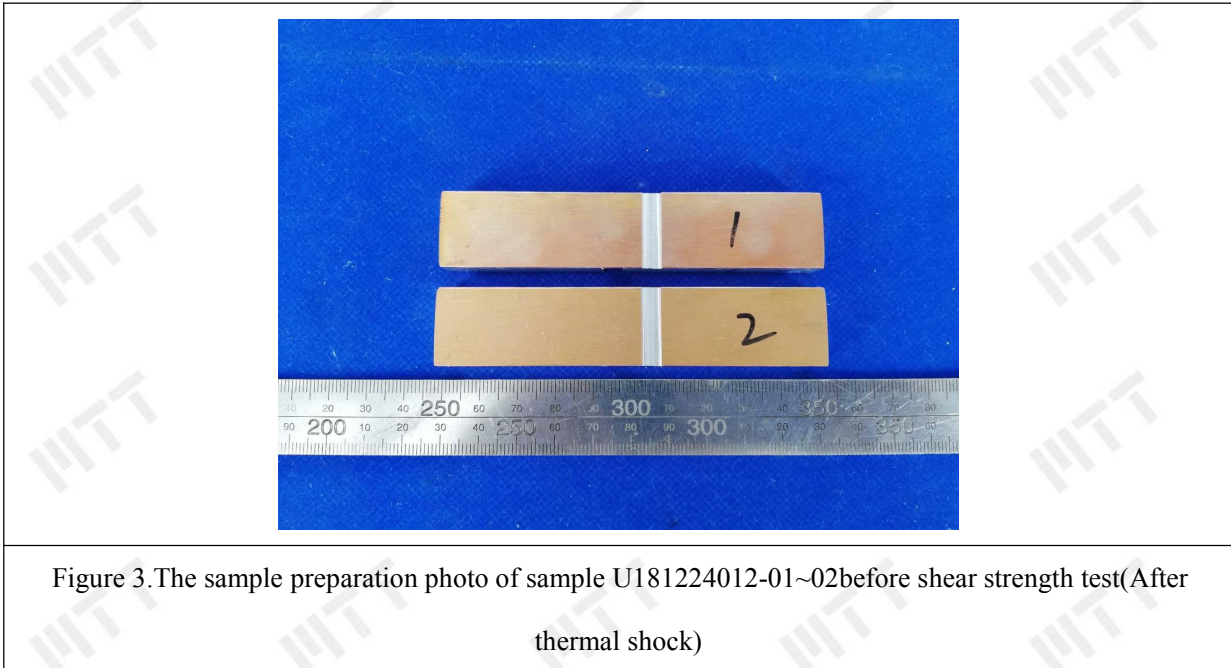


Figure 2. The photo of sample U181224012-01~02 before thermal shock test

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## Appendix 2

**Test Item:** Shear strength (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.
U181224012-01~02	CCA busbar	/	See Appendix 1	2pcs

**3. Test Equipments:**

No.	Name	Model No.
1	Microcomputer control electronic universal testing machine	ETM205D

**4. Testing Standard:**

GB/T 30586-2014 Copper clad aluminum flat bars and wires manufactured by continuous-casting and rolling

**5. Test Condition:**

Test speed: 50mm/min

**6. Test Result:**

Sample No.	Test Result(MPa)
U181224012	1 77
	2 77

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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. 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.

**5. Test Result:**

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

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## 6. Test Photos:



Figure 4.The photo of sample U181224014-01~02 during test

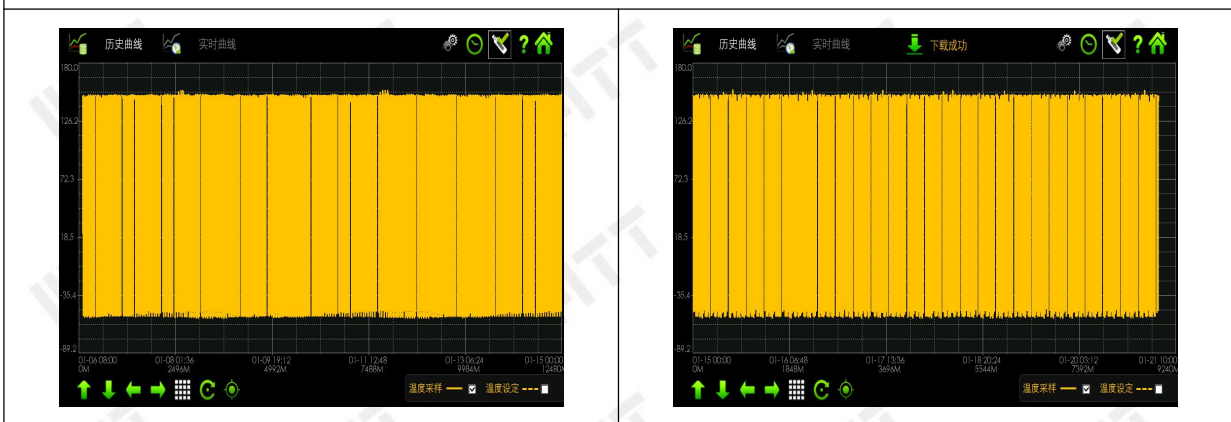


Figure 5.The photos of sample U181224014-01~02 test curve

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Figure 6. The photos of sample U181224014-01~02 after test

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## Appendix 4

### Test Item: Shear strength (After thermal shock)

#### 1. Environment Condition:

Temperature: 21.4℃ ; Relative humidity: 50%R.H

#### 2. Test Sample:

Sample No.	Sample name	Sample model	Sample photo	Sample Num.
U181224012-01~02	CCA busbar	/	See Appendix 1	2pcs

#### 3. Test Equipments:

No.	Name	Model No.
1	Microcomputer control electronic universal testing machine	ETM205D

#### 4. Testing Standard:

GB/T 30586-2014 Copper clad aluminum flat bars and wires manufactured by continuous-casting and rolling

#### 6. Test Condition:

Test speed: 50mm/min

#### 6. Test Result:

Sample No.	Test Result(MPa)
U181224012	1 55
	2 66

Annotations: /

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

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