



Report No: IN-QD-5505-180084-2
报告号

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Test Report

测试报告

Sample Name 样品名称 : Evaporator 蒸发器

Model 型号 : Coated Copper Tubes

Test Item 测试 : Shock and vibration test
冲击震动试验

Disclaimer

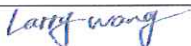

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Manufacturer 制造商	
-Company Name 公司名称	Elo Automated Stainless Steel Technologies (Qingdao) Co., Ltd.
-Company Address 公司地址	No. 101, Yan Yang Road, Chengyang District, Qingdao, Shandong. 山东省青岛市城阳区艳阳路 101 号
Test specification 测试规范	
-Standard(s):标准	See Test method provided by client 见客户提供测试方法
Abbreviation 缩写	
-does meet the requirement: 满足要求	P (Pass) 合格
-does not meet the requirement: 不满足要求	F (Fail) 失败
Test date 测试日期	22-Nov-2018 to 26-Nov-2018 2018-11-22 ~ 2018.12.26
Test equipment 测试设备	
Equipment name 设备名称	Vibration machine 振动试验台
Equipment No. 设备编号	WXR049
Equipment type 设备型号	ES-30-370
Next calibration date 下次校准日期	25-Oct-2019
Ambient Temperature 环温	22.0~24.0°C 45%~70%RH
Report 报告:	
-Report no: 报告编号	IN-QD-5505-180084-2
-Test by:(+signature) 测试 (签名)	Larry Wang 
-Approved by:(+signature) 批准 (签名)	Eden Zhao 
-Date of issue: 签发日期	29-Nov-2018 2018-11-29

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1. Test Method :

测试方法

Vibration (Sinusoidal)

Resonance search with stroboscope light and accelerometers.

2 – 500 Hz, 0.7 g

Ref.: IEC 60068-2-6, Test Fc

Vibration (Random) – Power ON

2 - 200 Hz, 1,44 grms, 3 x 150 min.

Ref.: IEC 60068-2-64, Test Fh

Vibration (Random) – Power OFF

2 - 200 Hz, 1,44 grms, 3 x 150 min.

Ref.: IEC 60068-2-64, Test Fh

Shock

Direction ± X: 10 x 10g, 11 ms, halfsine

Direction ± Y: 10 x 10g, 11 ms, halfsine

Direction Z: 4200 x 5g, 11 ms, halfsine

Direction Z: 10 x 10g, 11 ms, halfsine

Direction - Z: 10 x 10g, 11 ms, halfsine

Ref.: IEC 60068-2-27, Test Ea

In order to reduce the handling time, the resonance search, the three vibration tests and the shock test are performed in a sequence in the same axis before changing to the next axis.

Free Fall / Drop or shock

Height X m (corresponding to approx. 70 g, 11ms, 5 drops on bottom (Z-axis only)

Ref.: IEC 60068-2-31, Test Ec

2. Acceptance criteria:

判定依据

Required by client , No apparent damage and no leakage .

根据客户要求, 没有泄露和外观无破损。

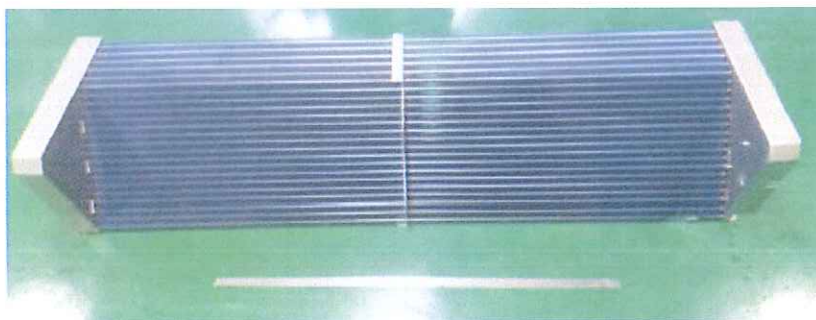
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3. Sample Picture (Before testing)

3.1 样品图片 (测试前)



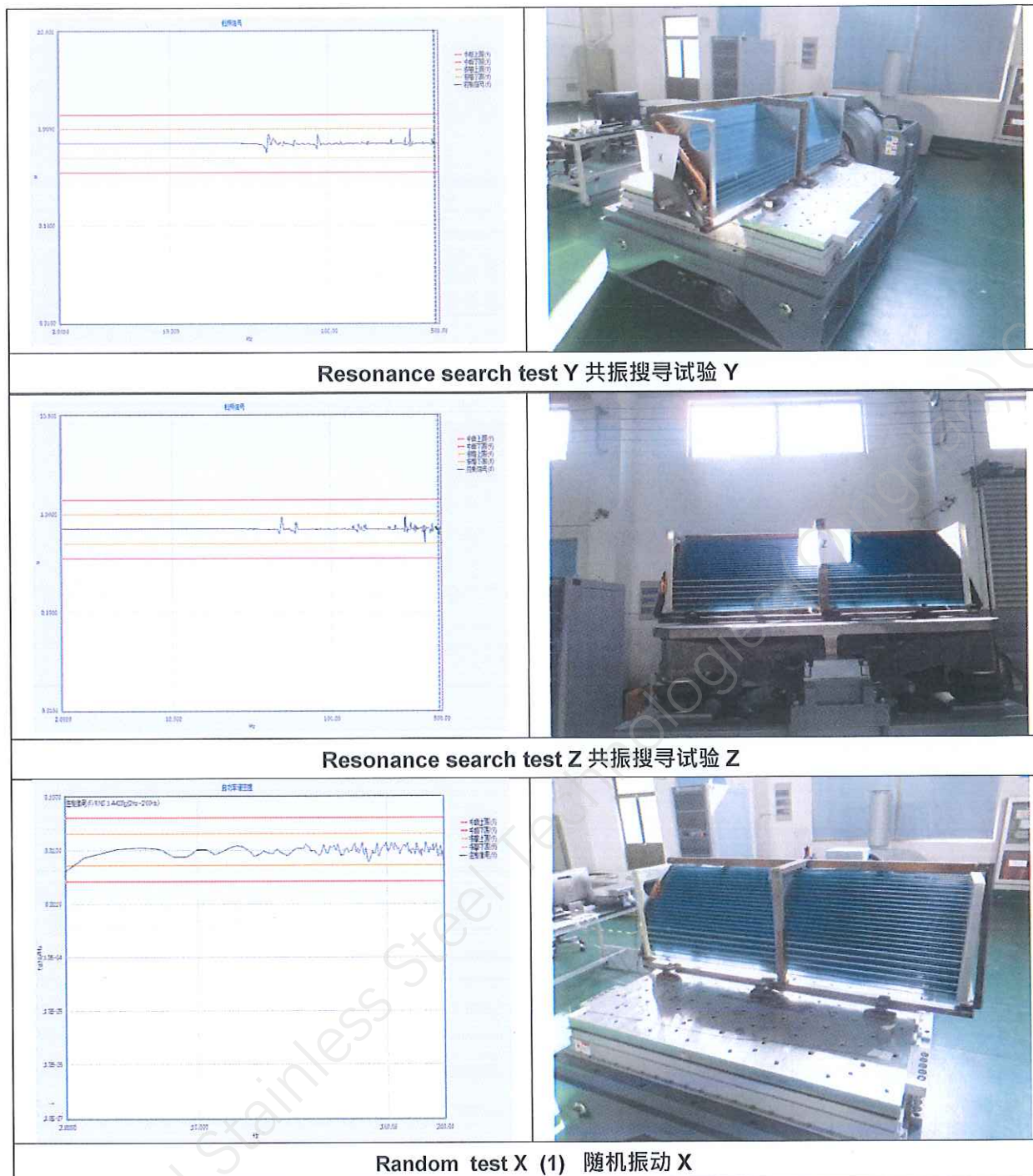
3.2 Sample under testing 测试中照片



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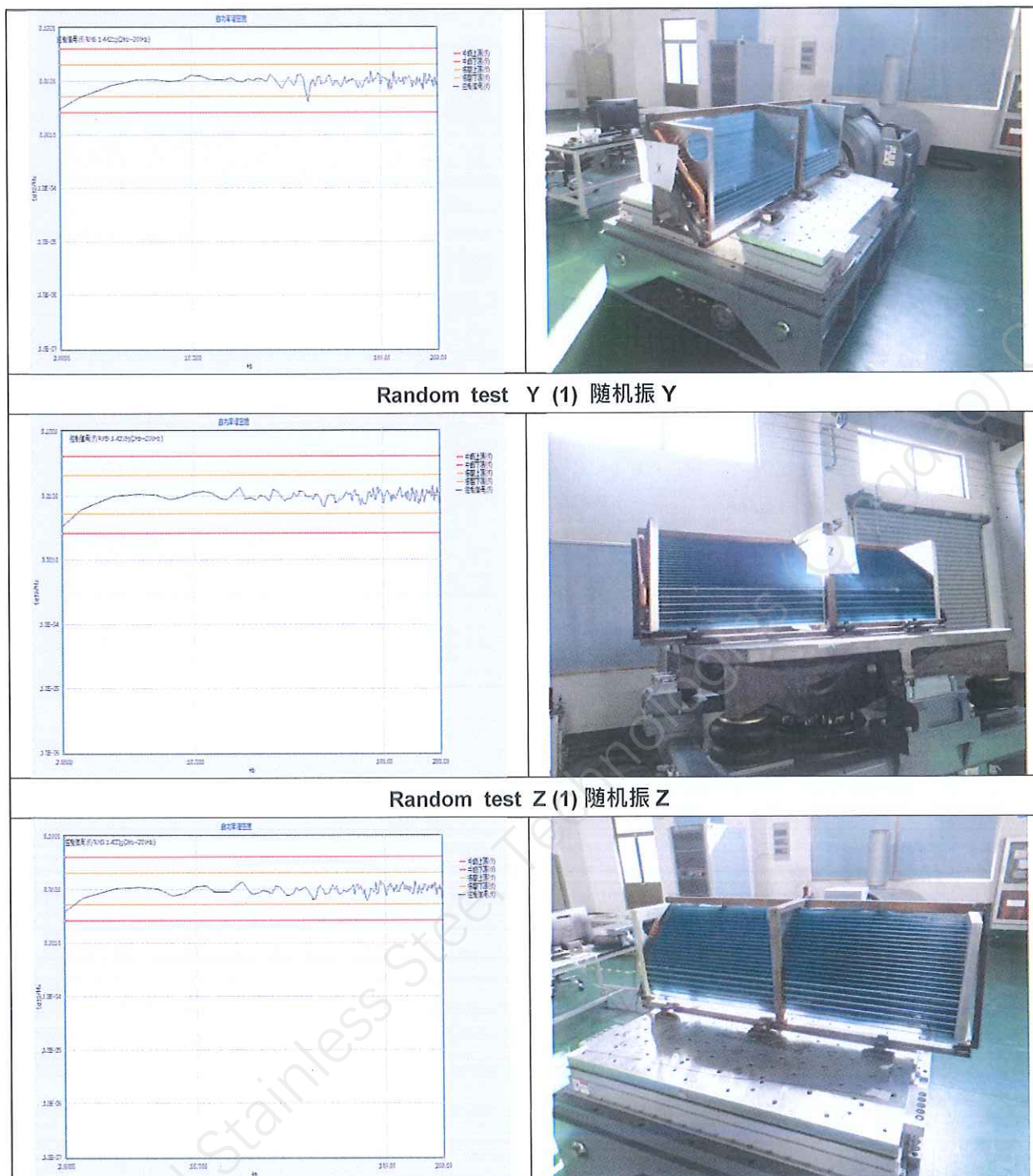
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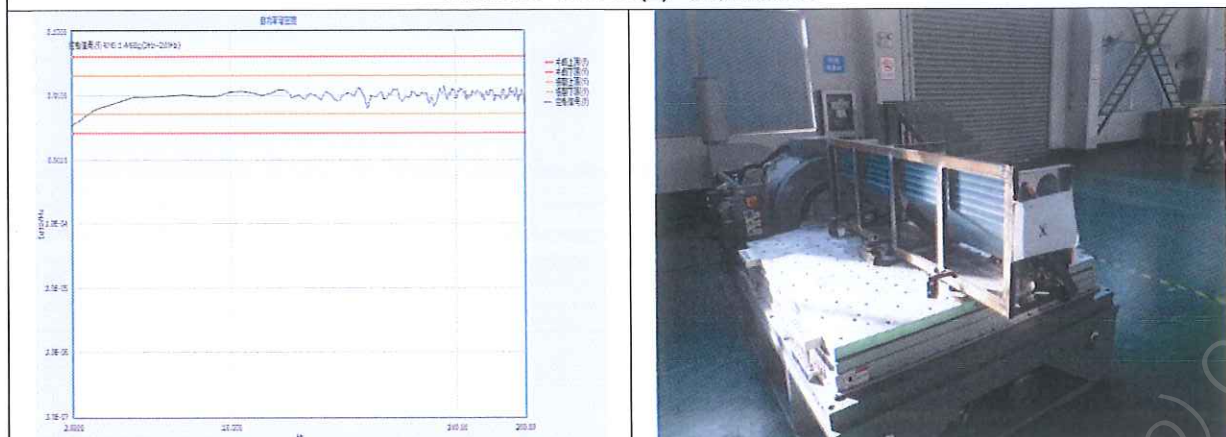


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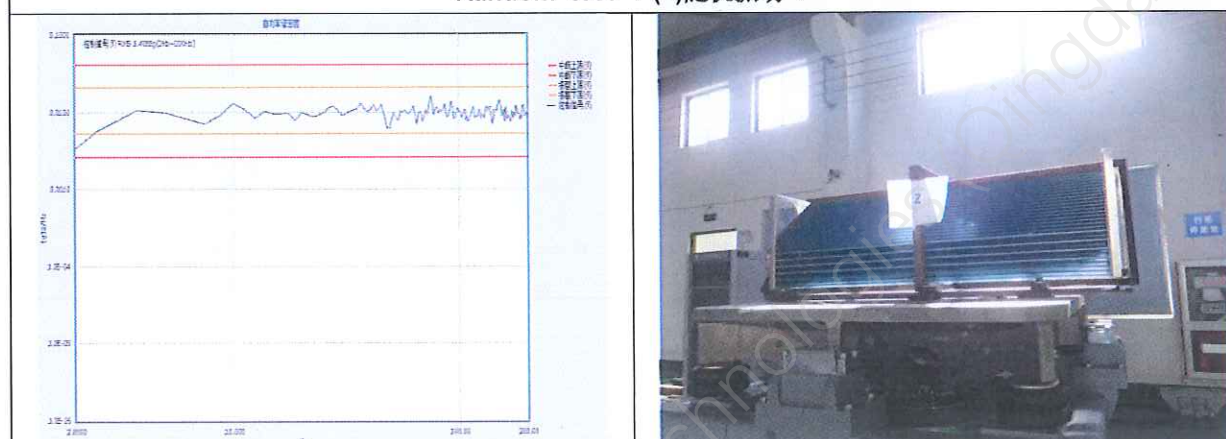
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Random test X (2) 随机振动 X



Random test Y (2) 随机振动 Y

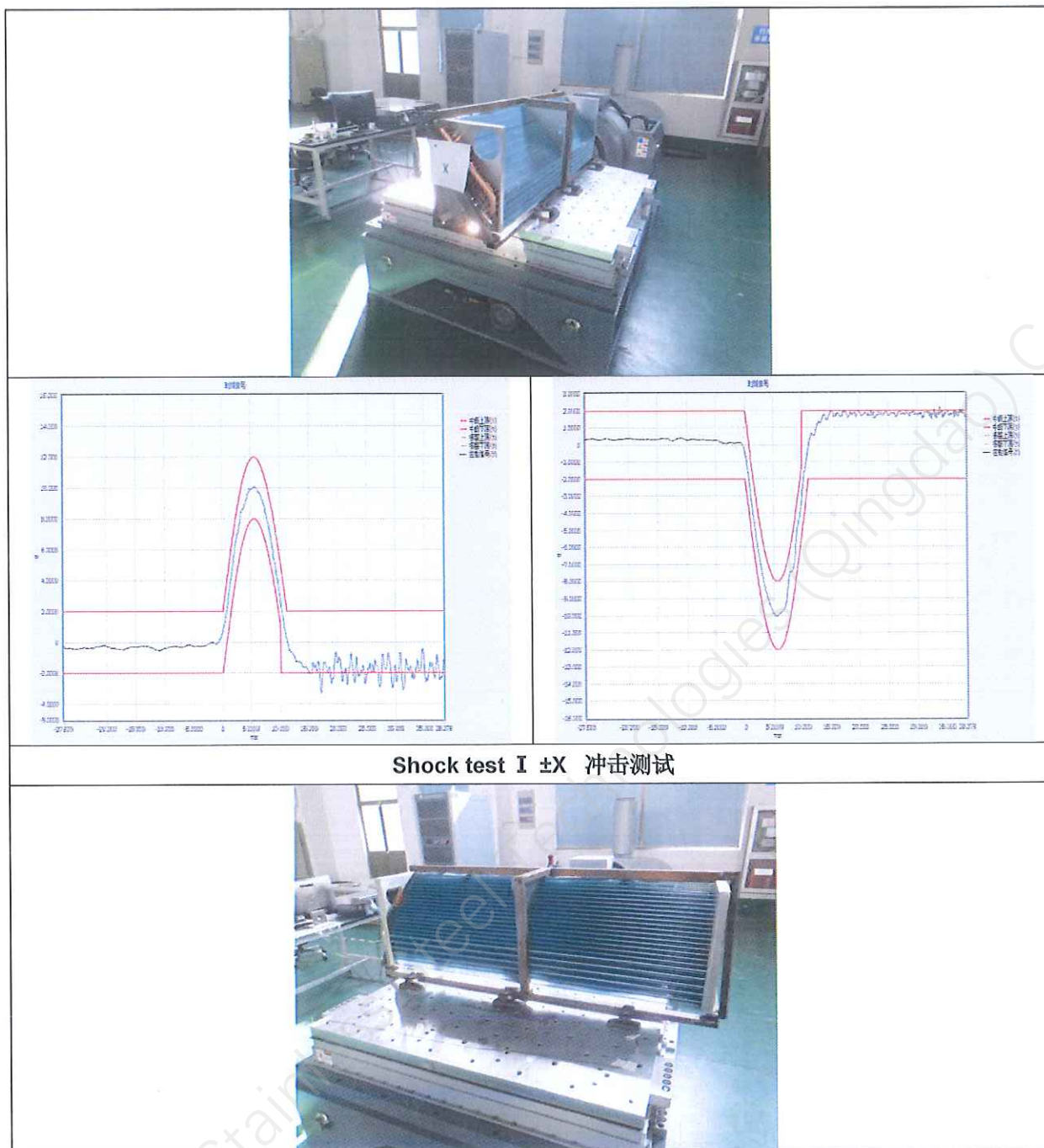


Random test Z (2) 随机振动 Z

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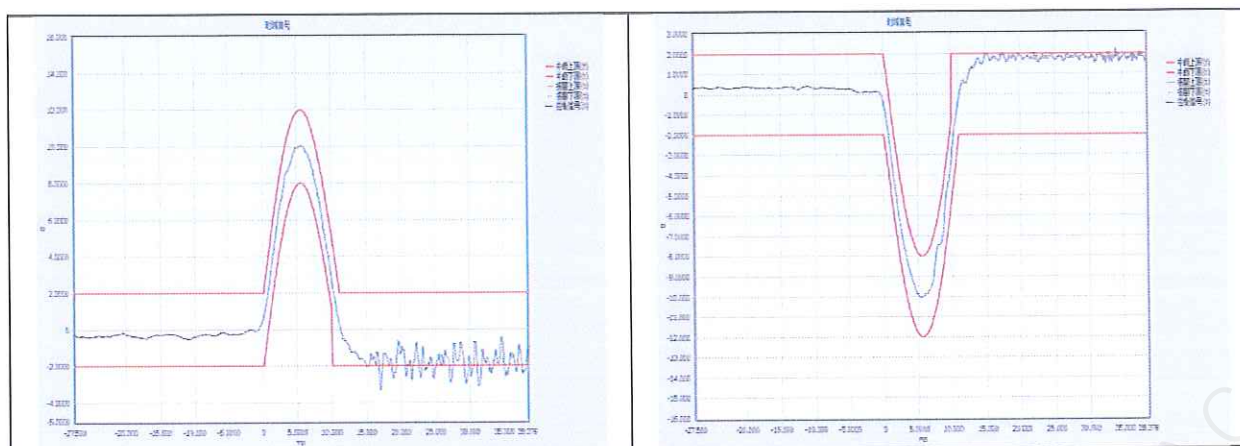
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Shock test I $\pm Y$ 冲击测试

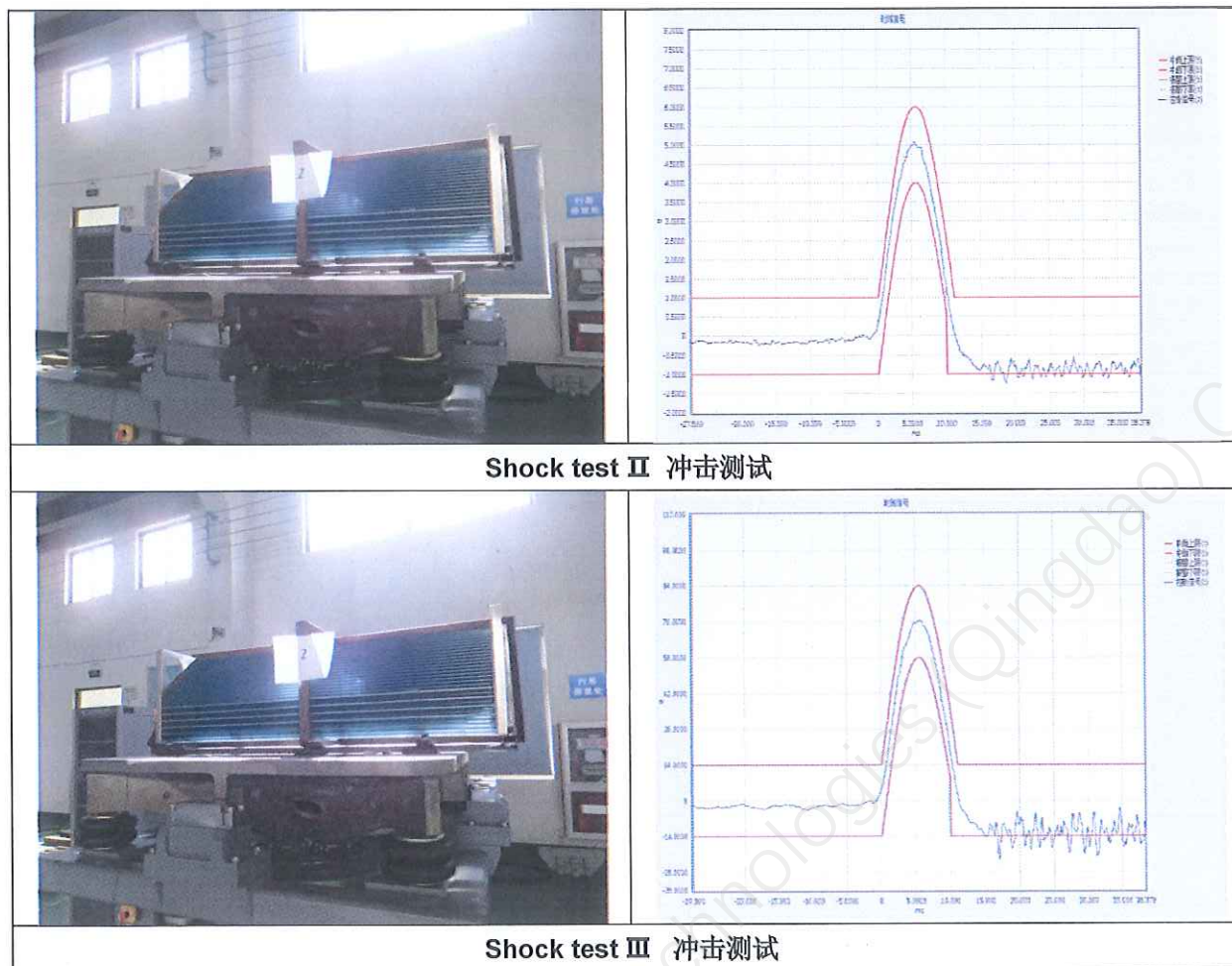


Shock test I $\pm Z$ 冲击测试

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3.3 After testing 测试后照片



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4. Result 结果

Test Item 试验项目	Observation 现象	Result (Pass/Fail) 结果 合格/失败
Resonance search test 共振搜寻试验	No apparent damage and no leakage . 外观无破损, 无泄露。	Pass
Random test (1) 随机振动 (1)	No apparent damage and no leakage . 外观无破损, 无泄露。	Pass
Random test (2) 随机振动 (2)	No apparent damage and no leakage . 外观无破损, 无泄露。	Pass
Shock test I 冲击试验 I	No apparent damage and no leakage . 外观无破损, 无泄露。	Pass
Shock test II 冲击试验 II	No apparent damage and no leakage . 外观无破损, 无泄露。	Pass
Shock test III 冲击试验 III	No apparent damage and no leakage . 外观无破损, 无泄露。	Pass

_____The end of this report _____

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