# TYPE-EXAMINATION REPORT

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Name of production Lift Ascending Car Overspeed Protection Means

Model/Type EC-4026EF-100

Client Shenyang Bluelight Drive Technology Co.,Ltd.

Manufacturer Shenyang Bluelight Drive Technology Co.,Ltd.

| | | | |
|---|---|---|---|
| Name | Lift Ascending Car Overspeed Protection Means | | |
| Type Code | EC-4026EF-100 | | |
| Sample No. | 20120638 | Date of manufacture | / |
| Reducing manner | Braking the shaft | Product No. | / |
| Type test suspension ratio | 1:1 | Speed monitoring unit | Overspeed governor |
| Balance factor | 0.4-0.5 | Tripping manner | electrical |
| Reset means | electrical | / | / |
| Type test suspension ratio 1:1 | | | |
| Rated speed(m/s) | 0.5-8.0 | Tripping speed(m/s) | 0.63-9.2 |
| Rated load (kg) | 1000-4000 | Car-side mass(kg) | 2800-4020 |
| Counterweight-side mass(kg) | 3300-6020 | Permissible mass(P+W) (kg) | 6100-10040 |
| Explanation | Car-side mass is sum of car mass without any load and mass of some of additional mass at the same side. Counterweight-side mass is sum of counterweight mass and mass of some of additional suspension mass at the same side. Additional mass is sum of the mass of accompanied cable, ropes and compensation chains etc. | | |
| Client | Name | Shenyang Bluelight Drive Technology Co.,Ltd. | |
| | Address | No.37, Shiji Road,Hunnan New Distrct,Shenyang,China | |
| Manufacturer | Name | Shenyang Bluelight Drive Technology Co.,Ltd. | |
| | Address | No.37 Shiji Road,Hunnan New Distrct,Shenyang,China | |
| Place of inspection | Shenyang Alpha Lift Co., Ltd. | Sample condition | Normal |
| Date of inspection | 2012.12.22 | Type of inspection | Type-Examination |
| Condition of inspection | Temperature: 8.8℃, humidity: 44%RH | Inspection item | All suitable item. |
| Standard for inspection | TSG T7001-2005 *Regulation for Type Tests of Elevators* *Rules for the construction and installation of electric lifts* & GB7588-2003 *Safety* (equiv. EN81-1:1998) | | |
| Conclusion | By the Type-Examination, the product is confirmed to be in accordance with *TSG T7001-2005 Regulation for Type Tests of Elevators* *for the construction and installation of electric lifts (eq* & GB7588-2003 *Safety rules* (equiv. EN81-1:1998). | | |

(stamp)

Date of issued: 2012.12.26

Inspector: [illegible]

Approved by: [illegible]

Reviewed by: [illegible]

SHENZHEN INSTITUTE OF SPECIAL EQUIPMENT INSPECTION AND TEST

# TYPE-EXAMINATION REPORT

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1 Test Result

| No. | Item No. | Item Description | Inspection result | Conclusion |
|---|---|---|---|---|
| 1 | 1.1 | The compose model of the ascending car overspeed protection means | overspeed governor -brake device | passed |
| 2 | 1.2 | The position where the deceleration element to grip | Braking the shaft | passed |
| 3 | 2 | The tripping speed of the speed monitoring unit | 0.575m/s-9.2m/s | passed |
| 4 | 3.1 | The structure of the ascending car overspeed protection means | meet the requirement | passed |
| 5 | 3.2 the deceleration element | a. Check braking function | meet the requirement | passed |
| 6 | | b. The maximum of the deceleration of the car in upwards direction | 0.484 $g_n$ | passed |
| 7 | | c. Check the braking function after release | meet the requirement | passed |
| 8 | | d. Check the sample after test | meet the requirement | passed |
| 9 | 4.1 | The else requirements when the gear to be drive with the outside force | meet the requirement | passed |
| 10 | 4.2 | The electrical protection device | meet the requirement | passed |
| 11 | 4.4 | Check how to reset | meet the requirement | passed |
| 12 | | The maximum tripping speed 9.2m/s is the nominal value of the rated speed of the overspeed governor of the sample elevator. | Explain | |

2 Test data

2.1 Brake device should be tested four times with the rated speed 0.5m/s rated load (P+W)= 6100kg.

| Test No. | The maximum tripping speed (m/s) | The average deceleration ($g_n$) | The maximum deceleration ($g_n$) | The braking distance(mm) |
|---|---|---|---|---|
| 1 | 0.50 | 0.445 | 0.483 | 29 |
| 2 | 0.77 | 0.426 | 0.484 | 71 |
| 3 | 0.85 | 0.389 | 0.433 | 95 |

| | | | | |
|---|---|---|---|---|
| 4 | 0.71 | 0.406 | 0.456 | 63 |

2.2 Brake device should be tested one time with the rated speed 4.0m/s, rated load 7500kg, (P+W)=

8860 kg.

| Test No. | The maximum tripping speed (m/s) | The average deceleration ($g_n$) | The maximum deceleration ($g_n$) | The braking distance(m) |
|---|---|---|---|---|
| 1 | 5.62 | 0.251 | 0.286 | 7.64 |

2.3 Brake device should be tested four times with the rated speed 0.71m/s, rated load 400kg,

(P+W)=100040 kg.

| Test No. | The maximum tripping speed (m/s) | The average deceleration ($g_n$) | The maximum deceleration ($g_n$) | The braking distance |
|---|---|---|---|---|
| 1 | 9.0 | 0.120 | 0.143 | 45.23 |
| 2 | 9.0 | 0.115 | 0.135 | 45.03 |
| 3 | 9.1 | 0.114 | 0.167 | 49 |
| 4 | 9.1 | 0.096 | 0.135 | 47 |

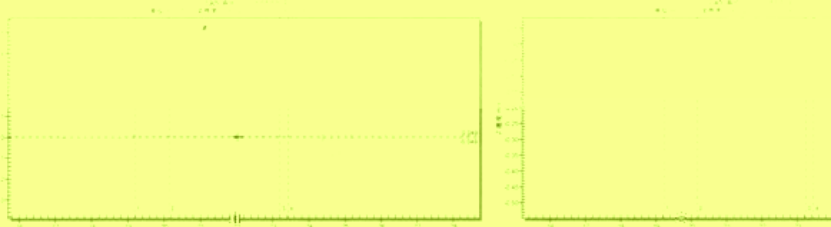
2.4 The car could be stopped safely after above tests, the brake device has no permanent deformation.

3 Test Graphs

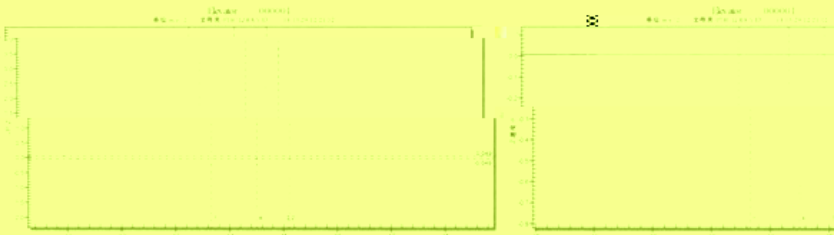
3.1 Brake device should be tested four times with the rated speed 0.71m/s, rated load 400kg,

(P+W)= 6100kg.

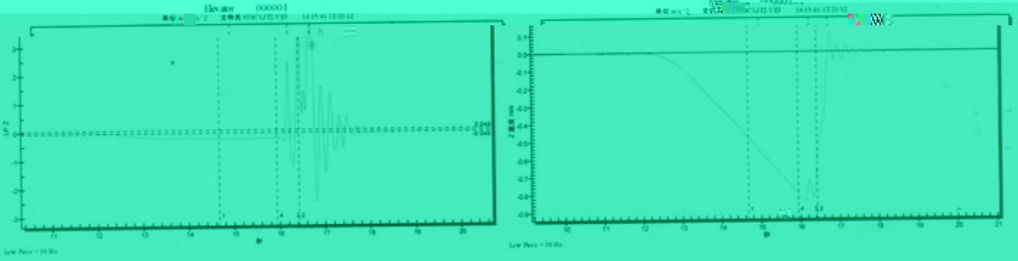
The first time



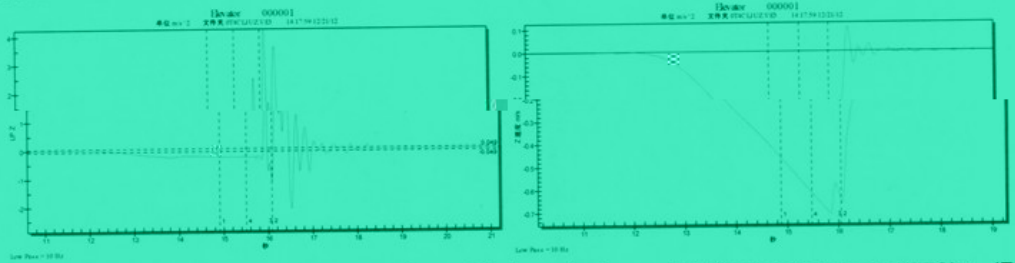
The second time



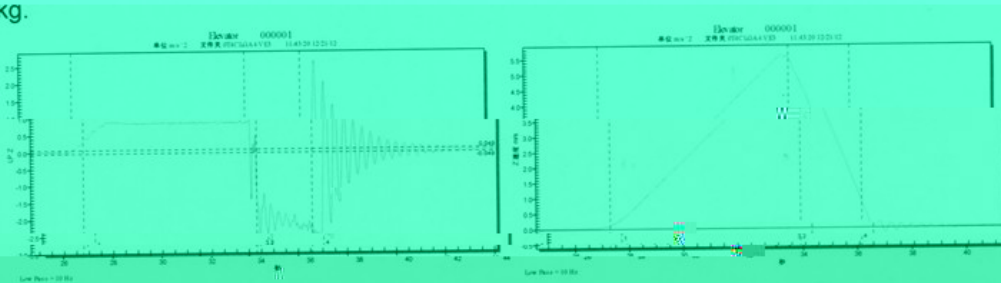
The third time



The fourth time

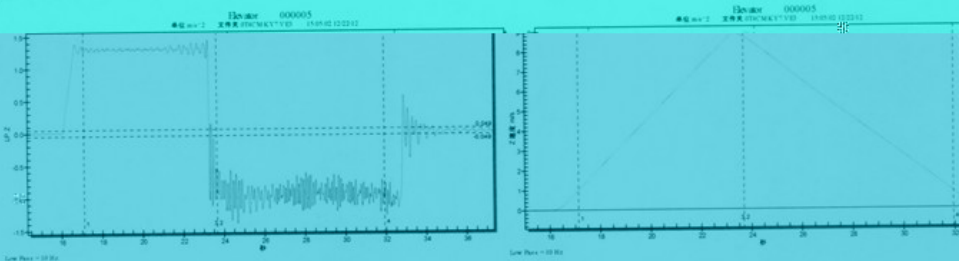


3.2 Brake device should be tested one time with the rated speed 0.4m/s, rated load 1250kg, (1+W) 1400kg.

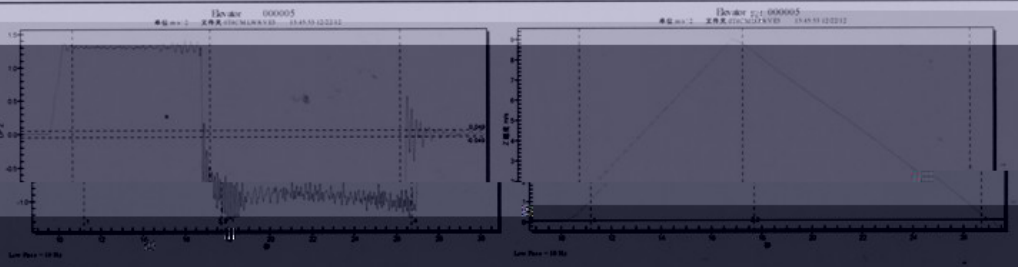


3.3 Brake device should be tested for 3 times with the rated speed 0.4m/s, rated load 1400kg, (1+W) 1400 kg.

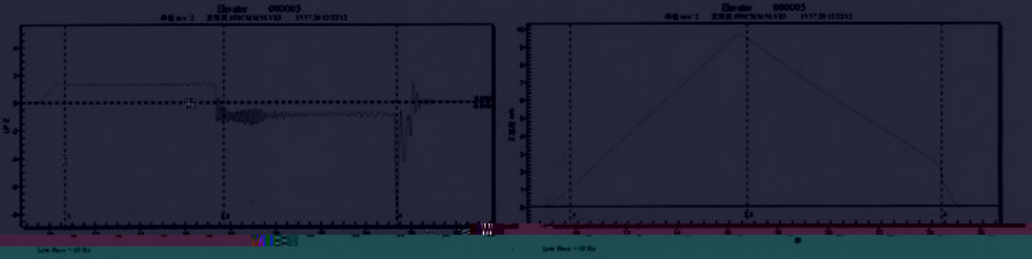
The first time



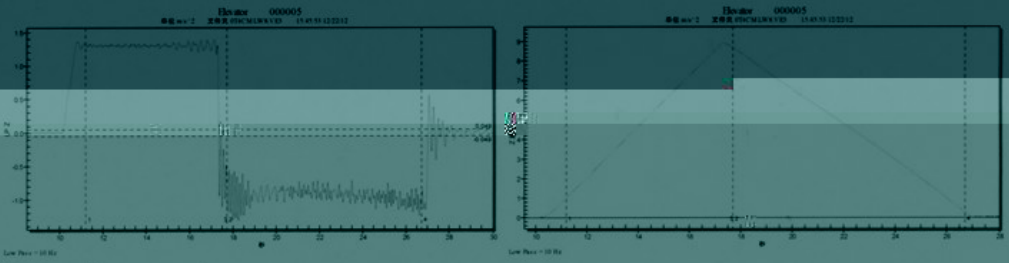
The second time



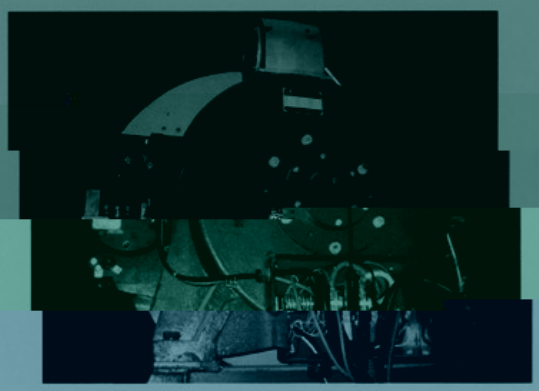
The third time



The fourth time



4 Photo of the sample



5 The

深圳市特种设备安全检验研究院

TS7610038-2011

2010191577Z 有效期至2013年12月5日

(2010)人质认字[0000]号 有效期至2013年12月5日

CNAS L0916

# TYPE EXAMINATION CERTIFICATE

Certificate No. TX F350-038-12 0658 Page 1 of 2

**Product type:** Ascending Car Overspeed Protection Means, FC-[illegible]

**Name and address of certificate Holder:** Shenyang Bluelight Drive Technology Co.,Ltd.

No.37, Shiji Road,Hunnan New District,Shenyang,China

**Manufacturer's name & address:** Shenyang Bluelight Drive Technology Co.,Ltd.

No.37, Shiji Road,Hunnan New District,Shenyang,China

**Date of Submission for Type-Examination:** 2012-12-15

**Test place:** Jiangsu Alpha [illegible]

**Inspection Report No.:** [illegible]

Table of main parameters

| Name | Lift Ascending Car Overspeed Protection Means | | |
|---|---|---|---|
| Type code | EC-4026EF-100 | Reducing manner | Braking the shaft |
| Speed monitoring unit | overspeed governor | Type test suspension ratio | 1:1 |
| Balance factor | 0.4-0.5 | Tripping manner | electrical |
| Reset means | electrical | / | / |
| Type test suspension ratio 1:1 | | | |
| Rated speed(m/s) | 0.5-0.6 | Tripping speed(m/s) | 0.75-0.9 |
| Rated load(kg) | 1000-4000 | Car-side mass(kg) | 2600-4020 |
| Counterweight-side mass(kg) | 5300-6020 | Permissible mass(P+W) (kg) | 6100-10040 |
| Explain | The max. tripping speed 9.2m/s is the nominal value on the nameplate of the overspeed governor of the sample elevator. | | |

**Principles of coverage for traction machine brakes:**

Brakes of the same series of specification are tested in accordance with "the applicable ranges of the system mass, rated speed and rated load" and "the series of specification" means that the factors of the construction of the brake, the components relevant to the amount of the braking force, the action manner, permissible location for assembly and applicable operation environment, two brakes are identical with each other.

Applicable range of system mass, car side mass, counterweight side mass, rated load and rated speed of units with different ratios of suspension are determined by the following formula:

Applicable range of system mass = range of system mass in type test × actual suspension ratio ÷ type test suspension ratio

Applicable range of car side mass = range of car side mass in type test × actual suspension ratio ÷ type test suspension ratio

Applicable range of counterweight side mass = counterweight side mass in type test × actual suspension ratio ÷ type test suspension ratio

Applicable range of rated load = range of rated load in type test × actual suspension ratio ÷ type test suspension ratio

Applicable range of rated speed = range of rated speed in type test × actual suspension ratio ÷ type test suspension ratio

Additional remarks

Note: car side mass is the sum of the mass of the empty car, the extra mass in the counterweight plus the extra mass in the counterweight side.

Counterweight side mass is the sum of the mass of the counterweight plus the extra mass in the counterweight side.

Extra mass refers to the total of the mass of the hoisting cable, suspension cable and possibly that of the compensation cable or chain.

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