# TYPE-EXAMINATION REPORT

Report No.:2012AF07747 Page 1 of 50

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.

SHENZHEN INSTITUTE OF SPECIAL EQUIPMENT INSPECTION AND TEST
GUANGDONG STATION OF ELEVATOR QUALITY SUPERVISION AND TEST

| | | | |
|---|---|---|---|
| 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) | 0.575-0.72 |
| 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 mass at the same side. Additional mass is sum of the mass of accompanied cable, suspension 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 Elevator Co.,Ltd. | Sample condition | Normal |
| Examination | Date of inspection | 2012-12-22 | Type of inspection |
| | Condition of inspection | Temperature: 8.8℃, humidity: 44%RH | Inspection item |
| Suitable item | Standard for Inspection | TSG T7001-2005 Regulation for Type Tests of Elevators & GB75 | |
| GB7588-2003 Safety | | Rules for the construction and installation of electric lifts (eqv. EN8 | |
| (eqv. EN81-1:1998) | | | |
| In accordance with TSG | Conclusion | By the Type-Examination, the product is confirmed to be in a | |
| GB7588-2003 Safety Rules | | T7001-2005 Regulation for Type Tests of Elevators & GB758 | |
| (eqv. EN81-1:1998). | | for the construction and installation of electric lifts (eqv. EN81-1 | |
| (Seal/stamp) | | | |
| Dated: 2012-12-26 | | Date of issue | |
| Approved by: | Reviewed by: | Inspected | |

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 decelerating 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 | 4.3.1 | The structure of the ascending car overspeed protection means | meet the requirement | passed |
| 5 | 3.2 | a. Check braking function | meet the requirement | passed |
| 6 | 3.2 | b. The maximum of the deceleration of the car in upwards direction | 0.484 g | passed |
| 7 | 3.2 | c. Check the braking function after release | meet the requirement | passed |
| 8 | 3.2 | 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 |
| Explain | | The max tripping speed 0.2m/s is the nominal value on the name plate of the overspeed governor of the sample elevator. | | |

2 Test data

2.1 Brake device should be tested four times with the rated speed 0.5m/s rated load 1000kg (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 | 0.48 | 29 |
| 2 | 0.77 | 0.426 | 0.4 | 71 |
| 3 | 0.85 | 0.389 | 0.43 | 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 1250kg, (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 6.0m/s, rated load 10400kg, (P+W)=100040 kg.

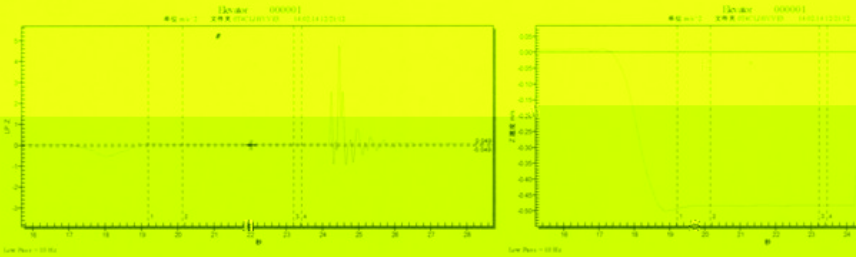
| Test No. | The maximum tripping speed (m/s) | The average deceleration ($g_n$) | The maximum deceleration ($g_n$) | The braking distance(m) |
|---|---|---|---|---|
| 1 | 9.0 | 0.120 | 0.143 | 45.23 |
| 2 | 9.0 | 0.115 | 0.135 | 45.07 |
| 3 | 9.7 | 0.114 | 0.167 | 49. |
| 4 | 9.1 | 0.096 | 0.135 | 47. |

2.4 The car should be stopped after all above tests the brake device has no permanent deformation.

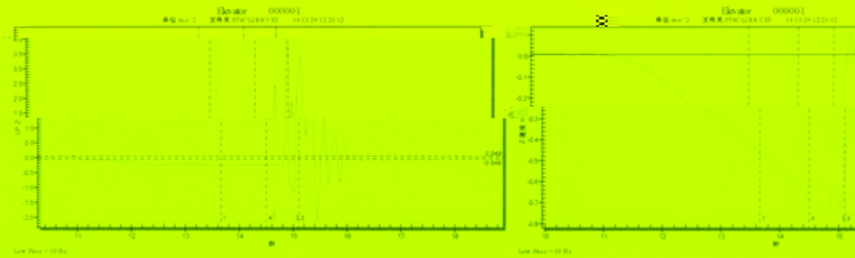
3 Test Graphs

3.1 Brake device should be tested four times with the rated speed 6m/s, rated load (P+W)= 6100kg.

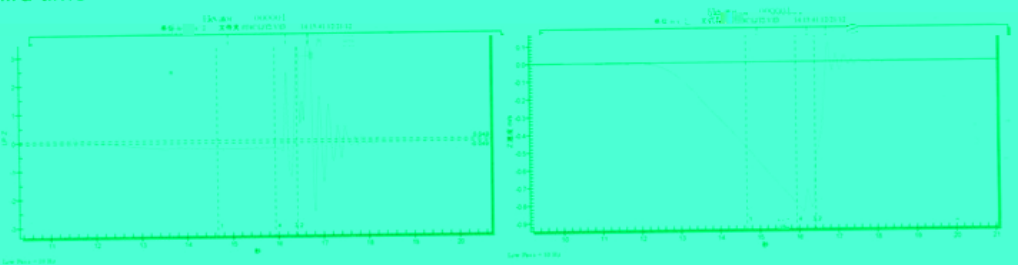
The first time



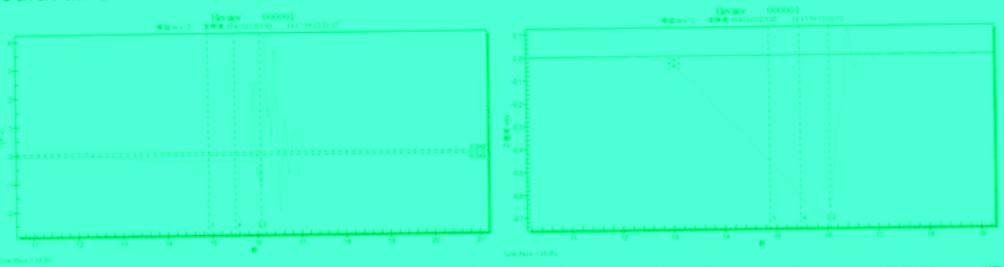
The second time



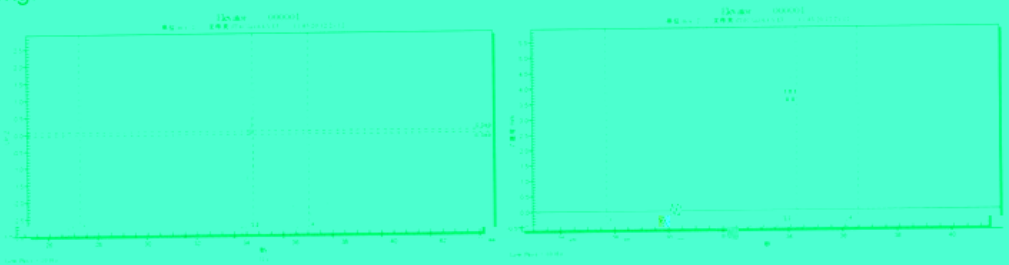
The third time



The fourth time



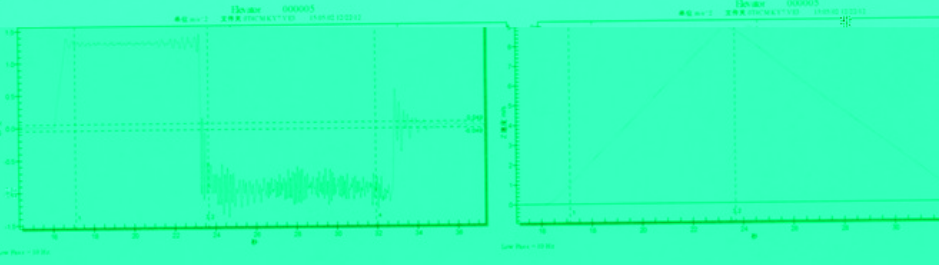
3.2 Brake device should be tested one time with the rated speed 40m/s rated load 1250kg, the W
1250kg.



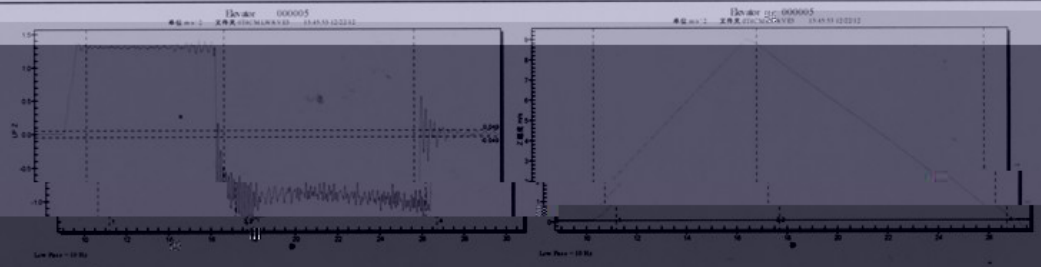
3.3 Brake device should be tested four times with the rated speed 40m/s rated load 2000kg,

2000 kg.

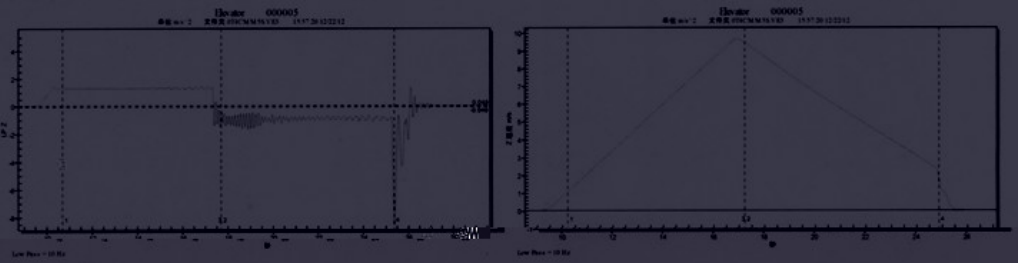
The first time



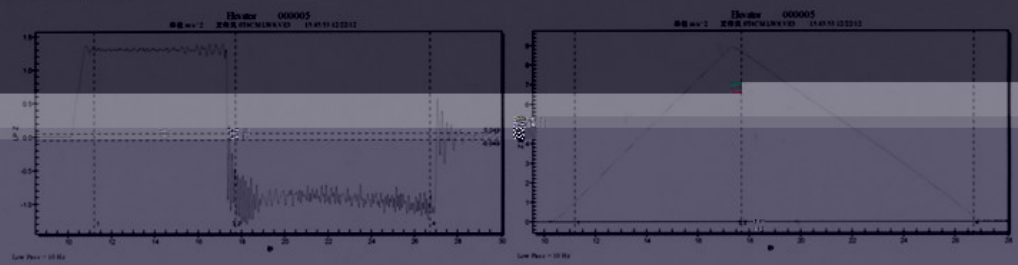
The second time



The third time



The fourth time



4 Photo of the sample



5 The

SISE
深圳市特种设备安全检验研究院
SHENZHEN INSTITUTE OF SPECIAL EQUIPMENT INSPECTION AND RESEARCH

CMA 201019157777 有效期至2013年12月5日

(2010)(粤)质量计字[0]第[0]号 有效期至2013年12月5日

ilac-MRA CNAS

TESTING
CNAS L0916

TS7610038-2011

# TYPE-EXAMINATION CERTIFICATE

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

**Product type:** Electrosensitive Protective Means, FC-1040255-100

**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 Co.,Ltd.

**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) | 0.5-2.0 | Tripping speed(m/s) | 0.75-2.8 |
| Rated load (kg) | 1000-4000 | Car side mass(kg) | 2600-4020 |
| Counterweight -side mass(kg) | 3300-6020 | 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. | | |
| Additional remarks | **Principles of coverage for traction machine brakes:**<br>Brakes of the same series of specification are tested in accordance with the applicable ranges of the system mass, rated speed, the diameter and speed. The same series of specification means that in terms 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 exactly identical with each other.<br>Applicable range of system mass, car side mass, counterweight side mass, rated load and rated speed of lifts with different ratios of suspension are determined by the following formula:<br>Applicable range of system mass = range of system mass in type test × actual suspension ratio ÷ type test suspension ratio<br>Applicable range of car side mass = range of car side mass in type test × actual suspension ratio ÷ type test suspension ratio<br>Applicable range of counterweight side mass = counterweight side mass in type test × actual suspension ratio ÷ type test suspension ratio<br>Applicable range of rated load = range of rated load in type test × actual suspension ratio ÷ type test suspension ratio<br>Applicable range of rated speed = range of rated speed in type test × actual suspension ratio ÷ type test suspension ratio<br>Note: car side mass is the sum of the mass of the car, the extra mass in the car side, the counterweight plus the extra mass in the counterweight side.<br>Counterweight side mass is the sum of the mass of the counterweight side.<br>Extra mass refers to the total of the mass of trailing cable, suspension cable and possibly that of the compensation cable or chain. | | |

Date of issued: 2012-12-26

SHENZHEN INSTITUTE OF SPECIAL EQUIPMENT INSPECTION AND TEST
GUANGDONG STATION OF ELEVATOR QUALITY SUPERVISION AND TEST