



2011000708Z



(2011)国认监认字(134)号

Special Equipment Type Test Report

Report No. T14-F39-13-058

Category of equipment: Safety protection component
Type of equipment: Lift machine
Name of product: Permanent Magnet Synchronous Gearless Traction Machine
Model of product: WYT-T
Applicant: Shenyang Bluelight Drive Technology Co., Ltd.
Manufacturer: Shenyang Bluelight Drive Technology Co., Ltd.



National Elevator Inspection and Testing Center

NOTICE

1. Each type test certificate issued by National Elevator Inspection and Testing Center (abbreviation NETEC) is corresponding to one type test report. The issue of type test certificate is based on the test conclusions of type test report.
2. Type test report is invalid without stamping the *Test Report Specialized Stamp* or issue date.
3. Type test certificate is invalid without stamping the *Test Report Specialized Stamp* or issue date.
4. Type test report is invalid without signatures of chief test, verification and approval.
5. Type test report or certificate can not be reproduced except in full, without written approval of NETEC.
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7. NETEC is only responsible for the test items and test conclusions of the sample. The test results and test conclusions just indicate sample statue at the time of test. Applicant is responsible for the authenticity of the information and technical documents of the sample.
8. Different opinions about type test report or certificate should be reported to NETEC within 15 days since receiving of type test report and certificate. NETEC will refuse after the time.
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10. It should be subject to the Chinese version, while the English version is for reference only.

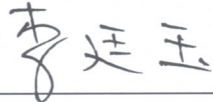


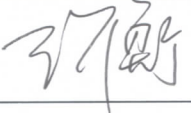
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| | | | |
|--|--|--|----------------------------|
| Name of product | | Permanent Magnet Synchronous Gearless Traction Machine | |
| Model of product | | WYT-T | |
| Serial No. of sample | | 1370876MC | Production date 2013-06 |
| Main technical parameter | Rated speed | | 4.00m/s |
| | Rated output torque | | 765N·m |
| | Motor rated power | | 15.4kW |
| | Allowed radial load of traction sheave | | 3500kg |
| | Explosion protection degree | | / |
| | Explosion protection type | | / |
| Applicant | Name | Shenyang Bluelight Drive Technology Co., Ltd. | |
| | Address | No.37 Shiji Road, Hunnan New District, Shenyang, Liaoning | |
| Manufacturer | Name | Shenyang Bluelight Drive Technology Co., Ltd. | |
| | Address | No.37 Shiji Road, Hunnan New District, Shenyang, Liaoning | |
| Receiving date | / | Sample No. | / |
| Test date | 2013-07-11 | Sample state | Normal |
| Test category | Type test | Test item | All application items |
| Test place | Shenyang Bluelight Drive Technology Co., Ltd. | | |
| Test condition | Ambient temperature: 27.0°C~30.0°C, relative humidity: 53%~54%, voltage: 383V | | |
| Test basis | <i>Regulation for type tests of lifts (2012), Rule for type test of lift machines (2012), GB/T 24478—2009 Traction machine of electric lifts, GB 7588—2003 Safety rules for the construction and installation of electric lifts, EN81-1:1998 Safety rules for the construction and installation of lifts- Part 1: Electric lifts</i> | | |
| Test conclusion | The type test is certificated. | | |
| Note | Issued date of the Chinese version: July 15, 2013 | | |
| Reported by:  | | Institute approval No.: TS7610014-2017  Issue date: 2013-9-28 | |
| Verified by:  | | | |
| Issued by:  | | | |

检验报告专用章

Main technical parameter and configuration of the sample

| | | |
|--|---|--|
| Model and name | WYT-T Permanent Magnet Synchronous Gearless Traction Machine | |
| Applicable environment | Indoor | |
| Structure type of traction machine | Permanent magnet synchronous gearless | |
| Rated speed | 4.00m/s | |
| Rated speed of the lift | 2.00m/s (suspension ratio is 2:1) | |
| Rated output torque | 765N·m | |
| Allowed radial load of traction sheave | 3500kg | |
| Centerline height of output shaft | 270mm | |
| Manual emergency operating device | Releasing brake handle, handwinding wheel | |
| Motor | Model | WYT-T2.0E |
| | Structure type | Permanent magnet synchronous outer rotor |
| | Rated power | 15.4kW |
| | Rated rotate speed | 192r/min |
| | Rated voltage | 380V |
| | Rated current | 32.7A |
| | Rated frequency | 32Hz |
| | Insulation grade | F |
| | Duty | S ₅ |
| | Protection degree | IP41 |
| | Mode of overload protection | Over-heat protection |
| | Starts per hour | 240F/h |
| | Explosion protection marking | / |
| Manufacturer | Shenyang Bluelight Drive Technology Co., Ltd. | |

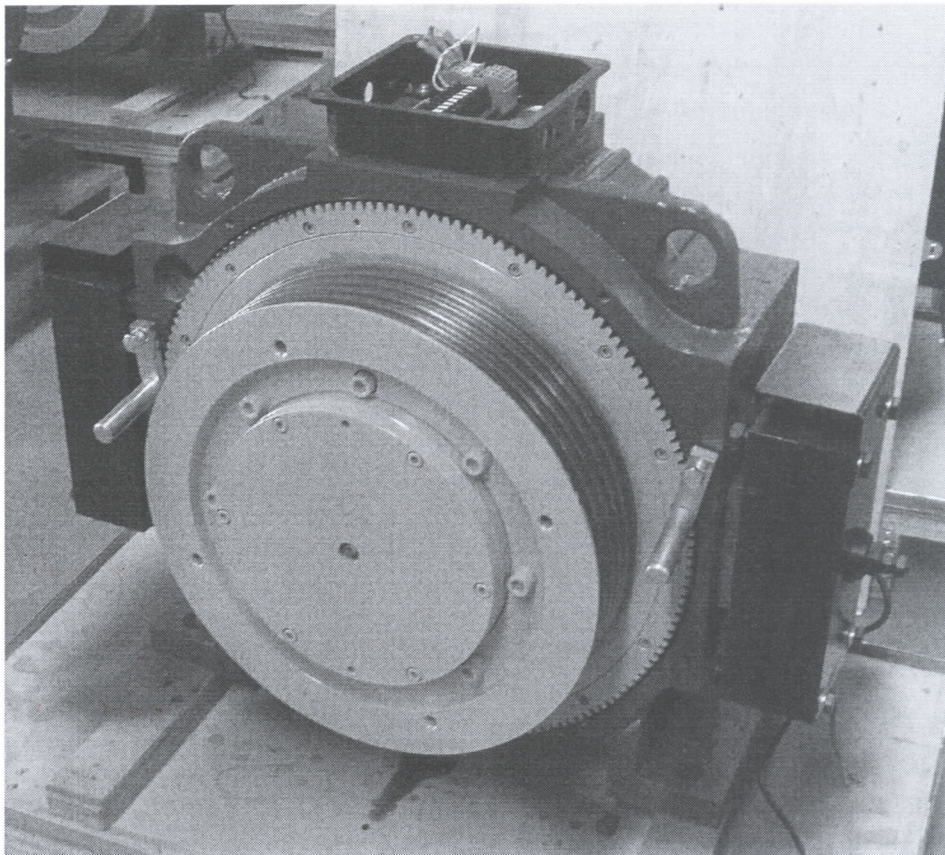
Main technical parameter and configuration of the sample (continued)

| | | |
|---------------------------|-----------------------------------|--------------------------------|
| Gear reducer | Structure type | / |
| | Reduction gear ratio | / |
| | Reduction steps | / |
| | Center distance | / |
| | Shaft angle | / |
| | Lubricating oil | / |
| Traction sheave | Number of grooves | 5 |
| | Type of grooves | Semi-circular undercut grooves |
| | Heat treatment | Anneal/Aging treatment |
| | Diameter of ropes | 10mm |
| | Pitch diameter of traction sheave | 400mm |
| | Mode of wrapping | Single |
| Brake | Model | BLB |
| | Action position | Traction sheave |
| | Structure type | Two sets, block type |
| | Insulation grade | F |
| | Rated voltage | DC 110V |
| | Diameter of brake sheave | 500mm |
| | Explosion protection marking | / |
| Applicable driving system | Speed control mode | AC variable frequency control |
| | Speed-controller | Frequency inverter |
| | Feedback device of speed | Encoder |



| No. | Items No. | Test items | Test results | Conclusion |
|-----|-----------|------------------------------------|---|------------|
| 21 | 3.3.10 | Lift machine efficiency | Output power: 15.40kW Input power: 16.92kW Efficiency: 91.0% | Pass |
| 22 | 3.3.11 | Protection of the encoder | Comply with requirements | Pass |
| 23 | 3.3.12 | Appearance | Comply with requirements | Pass |
| 24 | 3.4 | Nameplate of the lift machine | Comply with requirements | Pass |
| 25 | 3.5 | Speed | Rated speed: 4.00m/s Test rotate speed: 192r/min Speed: 4.021m/s Deviation: 100.5% $V_{\text{-rated}}$ | Pass |
| 26 | 3.6 | Protection for special environment | / | / |

Appendix Sample photo





2011000708Z



(2011)国认监认字(134)号



Certificate of Type Test for Special Equipment

No. TX F390-014-13 0058

Applicant's name and address:

Shenyang Bluelight Drive Technology Co., Ltd.
No.37 Shiji Road, Hunnan New District, Shenyang,
Liaoning

Manufacturer's name and address:

Shenyang Bluelight Drive Technology Co., Ltd.
No.37 Shiji Road, Hunnan New District, Shenyang,
Liaoning

Name of product
(Type of equipment):

Permanent Magnet Synchronous Gearless Traction
Machine (Lift machine)

Model and specifications:

WYT-T
Rated speed: 4.00m/s
Rated power: 15.4kW
Explosion protection degree: /

Configuration of product:

Configuration of lift machine

Type test report No.:

T14-F39-13-058

This certificate is valid for products of the models and specifications below
(without change of the product configuration):

Rated speed: not more than 4.00m/s (suspension ratio is 1:1)

Rated speed: not more than 2.00m/s (suspension ratio is 2:1)

Rated power: not more than 15.4kW

After type test, this product is accord with *Regulation for type tests of lifts (2012)*,
Rule for type test of lift machines (2012), *GB/T 24478—2009*, *GB7588—2003* and
EN81-1:1998.

Issue date:

2013-09-09

Issued date of the Chinese version: July 15, 2013

NETEC

National Elevator Inspection and Testing Center

Note:

1. This certificate is to confirm the products on type and the tested sample on conformity, only valid for the products that are in conformance with the tested sample mentioned above.
2. The holder of this certificate has responsibilities to ensure that the products conform to the requirements of the codes and regulations, and to ensure that the products are consistent with the tested sample mentioned above.



Appendix

Configuration of Lift Machine

No. TX F390-014-13 0058

| | |
|---|--|
| Drive type | Traction type |
| Structure type of traction machine | Permanent magnet synchronous gearless |
| Structure type of brake | Two sets, block type |
| Structure type of motor | Permanent magnet synchronous outer rotor |
| Action position of brake | Traction sheave |
| Structure type of gear reducer | / |
| Centerline height of output shaft | / |
| Center distance and shaft angle of gear reducer | / |
| Explosion protection type | / |
| Applicable environment | Indoor |

Issue date: 2013-07-15

Issued date of the Chinese version: July 15, 2013



Part 1 Technical document examination

| No. | Items No. | Examination items | Examination results | Conclusion |
|-----|-----------|-------------------|--------------------------|------------|
| 1 | 2.1 | Calculation files | Comply with requirements | Pass |
| 2 | 2.2 | Structure files | Comply with requirements | Pass |

Part 2 Test items and test results

| No. | Items No. | Test items | Test results | Conclusion |
|-----|-----------|---|---|------------|
| 1 | 3.1.1 | Insulation resistance of stator winding | Comply with requirements | Pass |
| 2 | 3.1.2 | Withstand voltage test | Comply with requirements | Pass |
| 3 | 3.2.1 | Mode of the braking system | Comply with requirements | Pass |
| 4 | 3.2.2 | The braking system installed in two sets | Comply with requirements | Pass |
| 5 | 3.2.3 | Brake linings | Comply with requirements | Pass |
| 6 | 3.2.4 | Braking torque | Comply with requirements | Pass |
| 7 | 3.2.5 | Activating voltage and release voltage of the brake | Rated voltage: DC 110V Activating voltage: DC 60.0V 54.5%U _{rated} Release voltage: DC 38.0V 34.5%U _{rated} | Pass |
| 8 | 3.2.6 | Delay-time of activating of the brake | 0.50s | Pass |
| 9 | 3.2.7 | Withstand voltage test of brake coil | Comply with requirements | Pass |
| 10 | 3.2.8 | Requirements for the belt transmission | / | / |
| 11 | 3.2.9 | Reliability test | Comply with requirements | Pass |

| No. | Items No. | Test items | Test results | Conclusion |
|-----|-----------|---|--|------------|
| 12 | 3.3.1 | Temperature rise | Stator winding temperature rise: 66.7K Before test-running Air temperature: 27.0°C Stator winding coil resistance: 0.901Ω After test-running Air temperature: 30.0°C Stator winding coil resistance: 1.414Ω Brake coil temperature rise: 57.9K Brake coil highest temperature: 87.9°C Before test-running Air temperature: 27.0°C Brake coil resistance: 80.7Ω After test-running Air temperature: 30.0°C Brake coil resistance: 99.5Ω | Pass |
| 13 | 3.3.2 | Running noise of the lift machine | Noise dB(A): Front: 60.2 Back: 59.6 Left: 60.3 Right: 60.5 Upside: 60.0 Background: 42.0 | Pass |
| 14 | 3.3.3 | Brake noise | Noise dB(A): Front: 64.6 Back: 64.0 Left: 63.8 Right: 64.2 Upside: 63.5 Background: 42.0 | Pass |
| 15 | 3.3.4 | Torque vibration of the lift machine | Positive direction: 0.15mm/s Reverse direction: 0.18mm/s | Pass |
| 16 | 3.3.5 | Working surface run-out in normal direction of the surface | 0.10mm | Pass |
| 17 | 3.3.6 | Working surface run-out in radial direction of the pitch-circle | 0.04mm | Pass |
| 18 | 3.3.7 | Manual emergency operating device | Comply with requirements | Pass |
| 19 | 3.3.8 | Hardness of the groove | 1. HB 235 2. HB 230 3. HB 228 4. HB 231 Deviation δ: HB 7 | Pass |
| 20 | 3.3.9 | Oil leakage of the gear reducer | / | / |

