CNAS L0454

2011000708Z

(2011)国认监认字(134)号

Special Equipment Type Test Report

Report No. TG[illegible]

Category of Equipment: Safety Protection Component

Type of Equipment: Traction Machine

Name of Product: Permanent Magnet Synchronous Gearless Traction Machine

Model of Product: WYT-S

Applicant: Shenyang Bluelight Drive Technology Co., Ltd.

Manufacturer: Shenyang Bluelight Drive Technology Co., Ltd.

NETEC

National Elevator Inspection and Testing Center

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NETEC
National Elevator Inspection and Testing Center

Type Test Report

No.: T3F3912002

Name of product	Permanent magnet synchronous gearless traction machine			
Model of product	WYT-S			
Serial No. of sample	20118903	Production date	2021.11	
Main technical parameter	Rated speed	2.50m/s	Rated output torque	765N·m
	Motor rated power	19.2kW	Allowed radial load of traction sheave	5500kg
	Suspension ratio	2:1	Mode of wrapping	Single
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	2021.12.15		Sample state	Normal
Test category	Type test		Test item	All application items
Test place	Shenyang Bluelight Drive Technology Co., Ltd.			
Test condition	Ambient temperature: 10.0 ℃~12.5 ℃, Relative humidity: 72.0%, Voltage: 390V			
Test basis	*Rules for Type Test of Elevators (tryout)* *Rule for Type Test of Lift Traction Machine (tryout)* *EN 81-1:1998 Safety Rules for the Construction and Installation of Lifts- Part 1: Electric Lifts*			
Test conclusion	The type test is certificated.			
Note	Issued date of the new version: 31.2012.12			

Issue date:

Reported by: Verified by: Issued by:

SAMPLE'S MAIN TECHNICAL PARAMETERS AND CONFIGURATION

Model and name	WYT-S	Permanent magnet synchronous gearless traction machine	
Applicable environment	Indoor	Structure type of traction machine	Permanent magnet synchronous gearless
Rated speed	2.5m/s	Rated output torque	745N·m
Rated load	1150kg	Allowed radial load of traction sheave	5500kg
Mode of wrapping	Single	Suspension ratio	2:1
Manual emergency operating device	Releasing brake handle, handwinding wheel		

Motor	Model	WYT-S2.5F	Rated rotate speed 240r/min
	Rated power	19.2kW	Rated current 40A
	Rated voltage	380V	Insulation grade F
	Rated frequency	40Hz	Protection degree IP41
	Duty	S_5	Allowed start times 240F/h
	Structure type	Permanent magnet synchronous outer rotor	
	Mode of overload protection	Over-heat protection	
	Manufacturer	Shenyang Bluelight Drive Technology Co., Ltd	
Gear reducer	Structure type	/	Reduction gear ratio /
	Reduction steps	/	Center distance /
	Lubricating oil	/	
Traction sheave	Number of grooves	5	Type of grooves Semi-circular undercut
	Diameter of ropes	10mm	Heat treatment Annealing treatment
	Pitch diameter of traction sheave	400mm	Mode of wrapping Single
Brake	Model	DZZF	Action position Acting on traction sheave
	Structure type	Two sets, block type	Diameter of brake sheave 500mm
	Rated voltage	AC 220V	Insulation grade B
Applicable driving system	Speed control mode	AC variable frequency control	
	Speed controller	Frequency inverter	
	Feedback device of speed	Rotary encoder	

Test items and test results

No.	Items No.	Test items	Test results	Conclusions
1	1.1	Fastening and welding	Comply with requirements	Pass
2	1.2	Assembly of all parts	Comply with requirements	Pass
3	1.3	Paint marking	Comply with requirements	Pass
4	2.1	Ratio of pitch diameter of traction sheave (D) to diameter of traction ropes (d)	D = 400mm d = 10mm D/d = 40	Pass
5	2.2	Material of traction sheave and hardness deviation of groove	Material: QT600-3 δ: HB10	Pass
6		Working surface roughness	Ra6.3μm	
7	2.3	Precision of groove of traction sheave	Working surface run-out in normal direction of the pitch-circle	0.06mm
8			Working surface run-out in radial direction of the pitch-circle	0.02mm
9			Average gaps between the brakes and the brake sheave	0.20mm
10	2.4		Working surface roughness of brake sheave	Ra3.2μm
11			Axial run-out of brake sheave working surface	0.02mm
12	3.1		Manual brake release device when emergency	Comply with requirements
13	3.2		Requirements for the belt transmission	/
14	3.3		Connection mode of braked components	Comply with requirem
15	3.4		Pressure mode of the brake shoe or pad	Comply with require
16	3.5		The coil of the brake shall require a continuous flow of current	Comply with requ
17	3.6		Minimum activating voltage of the brake	Rated voltage: A Activating voltage 65.9%
18			Maximum release voltage of the brake	Rated voltage Release volta 43.7
19			Delay-time of activating	

No.	Items No.	Test items	Test results	Conclusions
20	3.7	Withstand voltage test of brake coil	Comply with requirements	Pass
21	3.8.3	All the mechanical components shall be installed in two sets	Comply with requirements	Pass
22	4	Manual means of emergency operation	Comply with requirements	Pass
23	5	Protection for traction sheave	Comply with requirements	Pass
24	6	Torque vibration	/	/
25	7	Speed	Rated speed: 2.50m/s Test speed: 239.0r/min Speed: 2.503m/s 100.1%v	Pass
26	8	No-load running noise	Noise (dB(A)) Front: 56.8 Back: 57.0 Left: 57.3 Right: 57.8 Upside: 57.5 Background: 41.0	Pass
27		Oil temperature	/	/
28	9	Fault-free running and temperature rise	Stator winding temperature rise: 56.4K Before test-running Air temperature: 12.5℃ Stator winding coil resistance: 0.662Ω After test-running Air temperature: 10.6℃ Stator winding coil resistance: 0.835Ω	Pass
29			Brake coil temperature rise: 64.1K Brake coil highest temperature: 74.7℃ Before test-running Air temperature: 12.5℃ Brake coil resistance: 59.6Ω After test-running Air temperature: 10.6℃ Brake coil resistance: 74.5Ω	Pass
30	10	Machine efficiency	No doubt about without test	files, sting
31	11.1	Special precaution for the lift in the outdoor environment	/	/
32	11.2	Special precaution for the explosion protection lift	/	/

Appendix Sample photo



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Certificate of Type Test for Special Equipment

No. TX F390-003-12 0002

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
Model and specifications:	WYT-S Rated speed: 2.50m/s (suspension ratio: 2:1) Rated power: 19.2kW
Configuration of product:	See Annex
Type test report No.:	TX-GTS-12-002

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

Annex

Configuration of Traction Machine

No.TYX2330-00343-120002

Structure type of machine	Permanent magnet synchronous gearless	Structure type of motor	Permanent magnet synchronous outer rotor
Center distance of gear reducer	/	Structure type of gear reducer	/
Structure type of brake	Two sets, block type	Applicable environment	Indoor

Issue date: 2015.04.16

Issued date of the Chinese version: Jan. 31, 2012