



深圳市特种设备安全检验研究院
SHENZHEN INSTITUTE OF SPECIAL EQUIPMENT INSPECTION AND TEST
TS7610038-2011



TYPE-EXAMINATION REPORT

Report No. 2012AF0746

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Product category Safety protection devices of lifts

Product name Lift traction machine

Model/Type WYT-H

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

Explanation

1. The Laboratory is a legal inspection body for elevator type examinations authorized by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China, with certificate number TS7610038-2011.
2. The Laboratory has obtained the authorization from the China National Accreditation Service for Conformity Assessment (CNAS), with the certificate number L0916.
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7. The inspection department and the inspector(s) shall undertake the technical responsibility for the inspection results concerning the regulated inspection items.
8. The inspection results shall only apply to the inspected samples.

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Post Code: 518109 Tel: 0755-28079351 Fax: 0755-28079349

Website: www.sise.org.cn

E-mail: szlift@sise.org.cn

Product	Lift traction machine		
Type code	WYT-H	Sample No.	20120637
Product No.	/	Date of manufacture	/
General technical data	Maximum rated speed	8.0 m/s	
	Maximum rated load	1600kg	
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	
Sample condition	Normal		
Place of inspection	Jiangsu Alpha Lift Co.,Ltd.		
Date of inspection	2012/12/21	Type of inspection	Type-Examination
Condition of inspection	Ambient temperature :8.8℃ Humidity:44%, Voltage:407V	Inspection item	All suitable item
Standard for inspection	TSG T7001-2005 <i>Regulation for Type Tests of Elevators</i> GB 7588-2003 <i>Safety rules for the construction and installation of electric lifts (eqv. EN81-1:1998)</i>		
Conclusion	<p>By the Type-Examination, the product is confirmed to be in accordance with TSG T7001-2005 <i>Regulation for Type Tests of Elevators</i> & GB7588-2003 <i>Safety rules for the construction and installation of electric lifts (eqv EN81-1:1998)</i>.</p> <p style="text-align: right;">(stamp) Date of issued: December 26th, 2012</p>		

Approved by { 姜健 }

Reviewed by 陈林

Inspected by 林林

1. General technical data table

Type code	WYT-H	Apply the environment	Indoor	
Rated speed	8.0 m/s	Rated output torsion	3625 N·m	
Product No.	/	Date of manufacture	/	
Construction pattern	Gearless	Traction ratio	1:1	
Rated load	1600 kg	Hand winding device	With	
Allowable radial load of the traction sheave shaft	35000kg			
Motor	Type code	WYT-H8.0E1	Product No.	/
	Rated power	81.7kw	Rated rotate speed	215rpm
	Rated voltage	380V	Rated current	172.7A
	No-Load current	6A	Overload protective device	thermistor
	Rated frequency	53.8Hz	Working frequency	/
	Carrier frequency	/	Insulation class	F
	Protection class	IP41	Construction style	Outer rotor
	Working form	S5	Frequency of starter	240/h
	Manufacturer	Shenyang Blueight Drive Technology Co.,Ltd.		
Reduction device	Reduction style	/	Reduction ratio	/
	Construction	/	Lubricating oil	/
	Reduce level	/	Width between centres	/
Traction sheave	Groove quantity	16	Shape of groove	R shape
	Hoist ropes diameter	Φ16mm	Driving sheave pitch diameter	Φ 710mm
	Hardness of the surface	HB 240-276	Heat treatment requirements	/
	Round the rope method	Double wrap		
Service Brake	Type code	EC-4026EF-100	Function position	motor shaft
	Insulation class	F	Brake drum diameter	Φ1100mm
	Activate voltage	DC90V	Maintain voltage	DC40V
Driving system	Variable speed system	Variable voltage variable frequency control (VVVF)		
	Control	Frequency converter		
	Speed feedback	Rotary encoder		

2. Item Description and Inspection result

No.	Items	Technical requirements	Test results	Comment	
1	1 Fastening, welding and fixing condition	1.1 Fixing parts	All fasteners should be locked up correctly. No abnormality should occur to the splicing and riveting positions. The appearance of the welding position should be smooth and even. Cracks, welded burrs or any other defects are not permitted.	meet the requirements	pass
2		1.2 Assembly adjustment	Each component should be correctly adjusted and fixed. Movable parts can be turned flexibly. Each adjustment device can be reliably locked up.	meet the requirements	pass
3		1.3 Notices and markings	Brake releasing spanner should be painted red. Rotary parts and hand wheels should be painted yellow.	meet the requirements	pass
4	2 Accuracy and tolerance	2.1 Rope diameter ratio	The pitch circle diameter of the traction sheave should not be less than 40 times of the diameter of the traction rope.	44	pass
5		2.2 Pulley hardness	Ductile cast iron should be adopted, of which the abrasion resistance should not be less than QT600-3. The material should be well-distributed. On one same sheave surface, the hardness difference should not be greater than HB15.	meet the requirements	pass
6		2.3 Rope groove	The permissible maximum of the roughness of the rope groove surface is Ra6.3 μ m.	R _a 3.2 μ m	pass
			The allowance of the jerk value at the normal line direction of the groove surface should be within 1/2000 of the pitch circle diameter of the traction sheave.	0.15mm	pass
			The relative allowance of the pitch circle diameter for each rope groove is 0.10 mm at the direction of the semi-diameter.	0.10mm	pass
7		2.4 Service brake	block brake: the average clearance between the braking wheel and the block should not exceed 0.7mm.	/	/
8			The permissible maximum roughness of the braking wheel surface is Ra3.2 μ m.	/	/
9			The radial jerk value should not exceed 1 / 3000 of the diameter of the braking wheel.	/	/
10			The end-face jerk value of the brake disk of disk type or other types of brakes should be tested and determined by the limit indication given by the manufacturer.	clearance 0.19mm Roughness R _a 3.2 μ m	/
11		3 Service brake	3.1 Manual brake releasing device	For lift driving machine with manual emergency operation devices, it is required that the brake can be released manually and kept open only if the releasing force lasts.	meet the requirements
12	3.2 Transmission with belts		Use may be made of belts for coupling the motor or motors to the component on which the electro-mechanical brake operates. In this case a minimum of two belts shall be used.	/	/

13		3.3 Connection of the components braked.	The component on which the brake operates shall be coupled to the traction sheave or drum or sprocket by direct and positive mechanical means. Band brakes shall not be used.	meet the requirements	pass
14		3.4 Pressure on the brake shoe	The brake shoe or pad pressure shall be exerted by guided compression springs or weights.	meet the requirements	Pass
15		3.5 Working state	To hold off the brake, a continuous flow of current is required in normal operation.	meet the requirements	Pass
16		3.6 Starting and release voltages	Respectively, the minimum starting voltage of the brake should not exceed 80% of the rated voltage of the solenoid.	DC 48V	Pass
17			Respectively, the maximum release voltage should not exceed 55% of the rated voltage of the solenoid.	DC 30V	Pass
18			The delayed time for the open of the brake should not exceed 0.8s.	0.5s	pass
19		3.7 Pressure resistance	Tests should be conducted for the pressure resistance of the brake coil. The voltage upon the earth is 1000V, and during 1min, no puncture should occur.	meet the requirements	pass
20		3.8 Brake setting	All the mechanical components of the brake which take part in the application of the braking action on the drum or disk shall be installed in two sets.	meet the requirements	pass
21	4 Manual emergency operation devices		If the manual effort required to move the car in the upward direction with its rated load does not exceed 400N the machine shall be provided with a manual means of emergency operation allowing the car to be moved with the aid of a smooth and spokeless wheel.	meet the requirements	pass
22	5 Protection of traction sheave		Measures should be taken to prevent the wire rope from getting off the groove in case of looseness.	meet the requirements	pass
23			Effective protection shall be provided for accessible rotating parts, which may be dangerous, including: 1) Keys and screws in the shafts; and 2) projecting motor shafts.	meet the requirements	pass
24	6 Torsional and vertical vibration		For geared traction machine whose linear speed does not exceed 1.75m/s, in its normal operation with light load (e.g. 20%-40% of the rated load), the maximum of the virtual values of the torsional vibration speed measured at the pitch circle diameter of the traction sheave should not exceed: 1) 7.1 mm / s for passenger lifts; and 2) 12.0 mm / s for goods lifts.	/	/
25			For gearless machine or geared machine of which the traction sheave linear speed exceeds 1.75m/s, if the manufacturer has particular requirements for the vertical vibration of the machine, tests and determination should be made according to the limit indication given by the manufacturer in the light of the real testing situation	/	/

26	7 Linear speed of pitch circle diameter of traction sheave	When rated voltage and rated frequency is exerted on the driving machine, with the car empty, the linear speed at the pitch circle diameter of the traction sheave should be in the range of 92%-105% of the rated speed of the traction machine.	Linear speed	7.70m/s	pass	
			Reversal linear speed	7.70m/s		
			Linear speed tolerance	96.3%		
27	8 No-load operation noise	For traction machine in no-load operation at its rated speed, the following requirements should be met when measuring the average noise value at the A-weighted sound pressure level, and the noise value in the low speed condition should be lower than that in high speed condition: 1) For traction machine with a blower, the maximum is 70 dB (A); and 2) for traction machine without a blower, the maximum is 68 dB (A).	high speed no-load noise	68dB(A)	pass	
Low speed noise(with low speed winding)			/	/		
29	9 Trouble-free and temperature-rise test	No malfunction should occur during the test process.	meet the requirements		pass	
30			The oil temperature of the reduction box should not exceed 85℃ when the test is over.	/	/	
31			When B- or F-class insulation is adopted in the temperature rise of the electromotor stator winding, it should not exceed 80K and 105K, respectively.	F-class insulation temperature rise	11.4K	pass
			For the temperature rise and the highest temperature of the brake coil, the following requirements should be met: for A-,E-,B- and F-classes insulation, respectively, they should not exceed 65K, 80K, 90K or 105K and 100℃, 115℃, 125℃ or 150℃.	F-class insulation temperature rise	12.5K	pass
32		F-class insulation highest temperature	25℃			
33						
34	10 Overall efficiency	When necessary, tests may be conducted for the overall efficiency. The results should be determined by the efficiency indication given by the applicant.	/	/	/	
35	11 Requirements under special circumstances	For outdoor elevators, appropriate measures should be adopted which are fit for the operating circumstances and in accordance with the project requirements.	/	/	/	
36		For explosion-proof elevators, relevant protection measures should be adopted and a risk evaluation should be conducted to verify the safety of the product performance under explosion-protection circumstance.	/	/	/	



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TYPE-EXAMINATION CERTIFICATE

Certificate No. TX F390-038-12 0657

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Product & type: Lift gearless traction machine, WYT - H

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

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

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

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

Date of Submission for Type-Examination: 2012-12

Test place: Jiangsu Alpha Lift Co.,Ltd.

Inspection Report No. 2012AF0746

Date of Inspection: 2012/12/21

The following documents, bearing the type-examination number shown above, are annexed to

The this certificate: Inspection report No. 2012AF0746

Any additional information: see the appendix F390-038-12 0657

This certificate covers the following different size products of the same type mentioned above:

For the product type WYT - HW of the traction machine whose motor rated power $\leq 81.7\text{kW}$ and line speed of the traction sheave $\leq 8.0\text{m/s}$.

Certificate issued on the basis of the following requirement:

TSG T7001-2005 Regulation for Type Tests of Elevators

GB7588-2003 Safety rules for the construction and installation of electric lifts (eqv EN81-1:1998)

By the Type-Examination, the product is confirmed to be in accordance with TSG T7001-2005

Regulation for Type Tests of Elevators & GB7588-2003 Safety rules for the construction and installation of electric lifts (eqv EN81-1:1998).

The approved body address : 1032 Honggang Road,Luohu District,Shenzhen, China

Date of issued: December.26th,2012

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GUANGDONG STATION OF ELEVATOR QUALITY SUPERVISION AND TEST

(stamp)



Product configuration table

Product type		WYT-H	Environment applied to	Indoor	
Max. rated power (kW)		81.7	Max. line speed of the traction sheave (m/s)	8.0	
Construction pattern		AC Permanent-magnet synchronous without reduction device			
Motor	Construction pattern	AC three-phase outer-rotor motor	Brake	Construction pattern	Electromagnetic disc type
	Height of the centre (mm)	595		Function position	Motor shaft
Reduction device	Reduction style	/	Traction sheave	Supporting style	Two-side support
	Width between centres (mm)	/		Shape of groove	R shape
	Reduce level	/		Method of wrapping rope	Double wrap
Covering principle of lift traction machine:					
<p>For the same type-series to the test traction machine, the certificate covers products whose motor rated power and line speed of the traction sheave are no more than the test sample. The client should list parameters of all covered products when submission. "The same type-series" means: the whole construction pattern, style and width between centres of the reduction box, construction pattern of the motor and brake are the same.</p> <p>Lift rated speed and Lift rated load are determined by the following formula: Lift rated speed = Line speed of the traction sheave / Traction rate Lift rated load = Rated load of the traction machine * Traction rate</p> <p>Note: "Rated load of the traction machine" means Lift rated load when Traction rate is 1:1.</p>					

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