





# Type Test Certificate for Special Equipment (Lift)

#### Certificate No. TSX 312001420170370

Applicant:

Otis Electric Elevator Co., Ltd.

Registered address of

No.28 Jiuhuan Road, Jianggan District, Hangzhou,

applicant:

Zhejiang

Manufacturer:

Otis Electric Elevator Co., Ltd.

Registered address of

No.28 Jiuhuan Road, Jianggan District, Hangzhou,

Issue date: 2017

manufacturer:

Zhejiang

Category of equipment:

Traction and positive drive lift

Type of equipment:

Traction drive goods lift

Name of product

Vehicle lift

Model of product

TQJ

Type test report No.:

T14-3120-17-369, T3-324-11-006

After type test, this product is accord with TSG T7007—2016 Regulation for type tests of lifts, GB 7588—2003+XG1—2015 and EN 81-1:1998.

Applicable product model of the certificate: TQJ.

See appendix for application product parameters and configuration of the certificate.

### NETEC

### **National Elevator Inspection and Testing Center**

Note: The applicant has responsibilities to ensure that the products conform to the requirements of the safety technical specifications and relative standards, and to ensure that the products are consistent with the tested sample mentioned above.

## **Appendix**

## Configuration of Traction drive goods lift

			·	
Rated speed	≤0.50m/s	Rated load	≤5000kg	
Speed control mode	Variable frequency Manufacturer of speed		Hangzhou Optimax	
·	speed control	control device	Tech Co., Ltd.	
Deirectorde	Tuestien drive	Manufacturer of control	Hangzhou Optimax	
Drive mode	Traction drive	system	Tech Co., Ltd.	
Arrangement mode of	In upper machine	Manufacturer of driving	Suzhou Torin Drive	
driving machine	room	machine	Equipment Co., Ltd.	
Suspension ratio	4:1	Mode of wrapping	Single	
Suspension way of car	Top lift type	Number of car guide rail	≥4 columns	
Number of car	Single	Location of control cabinet	In machine room	
Mode of lift ascending		Mode of unintended car		
car overspeed	Rope clip	movement protection	Rope clip	
protection means		means		
Applicable		Connection mode of		
environment	Indoor	several cars	1	
Equipment protection			1970	
level	/	Special purpose product	1	
10101		Manufacturer of		
Model of PESSRAL	PESSRAL		1	
Function of PESSRAL	1			
	I.		EL 111	

Issue date: 2017-11







Report No. T14-3120-17-369

## **Special Equipment Type Test Supplementary Report** (Lift)

Category of equipment: Traction and positive drive lift

Type of equipment:

Traction drive goods lift

Name of product:

Goods lift

Model of product:

**FOVF** 

Applicant:

Otis Electric Elevator Co., Ltd.

Manufacturer:

Otis Electric Elevator Co., Ltd.

Category of type test:

Supplementary test

Test date:

2017-11-15



## NOTICE

- 1. Type test report is according to TSG T7007-2016 Regulation for type tests of lifts. It should be printed by the computer or filled out with pens and is invalid if altered.
- 2. Type test report is invalid without signatures of test, verification and approval. It is also invalid without stamping the *Test Report Specialized Stamp* or paging seal.
- Each type test certificate issued by National Elevator Inspection and Testing Center (abbreviation NETEC) is corresponding to one type test report at least. And in the type test report, test conclusion is The type test is certificated.
- 4. Type test certificate is invalid without stamping the *Test Report Specialized Stamp* or issue date.
- 5. Type test report or certificate can not be reproduced except in full, without written approval of NETEC.
- Type test report is only responsible for the test items and test conclusions of the sample. Applicant is responsible for the authenticity of the information and technical documents of the sample.
- Different opinions about type test conclusion should be reported to NETEC within 15 workdays since receiving of type test report and certificate. NETEC will refuse after the time.
- 8. It should be subject to the Chinese version, while the English version is for reference only.

NETEC National Elevator Inspection and Testing Center

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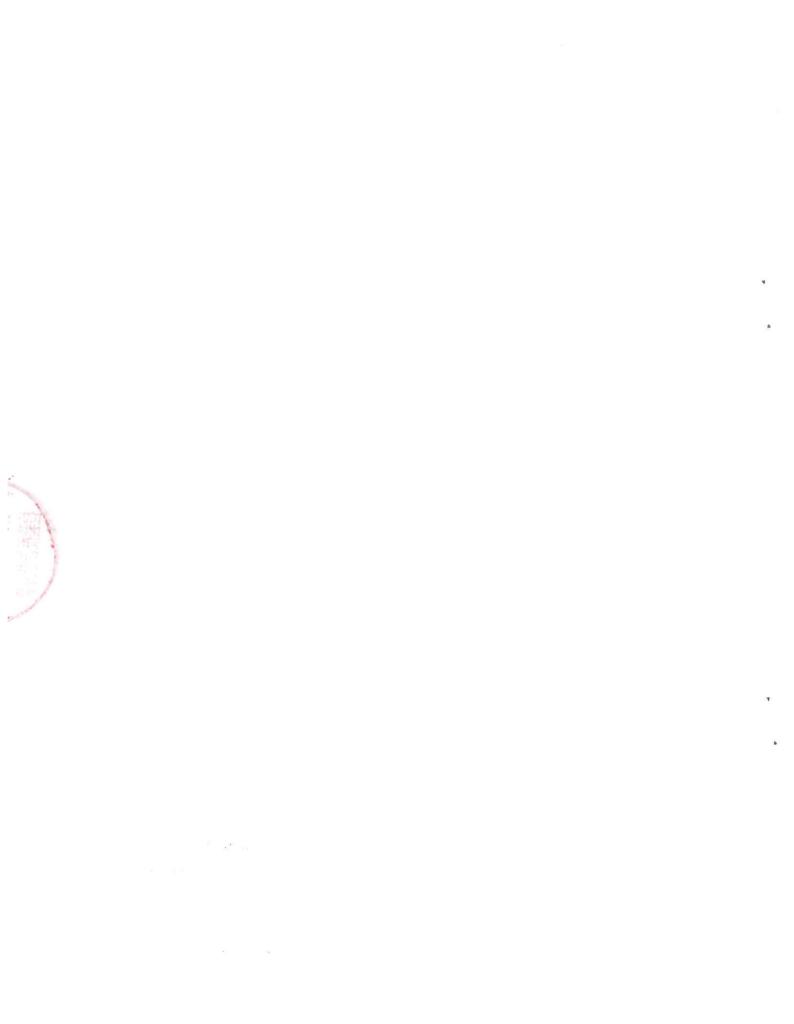
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#### **NETEC**

National Elevator Inspection and Testing Center

## Lift Type Test Report

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## Lift type test supplementary report

	LITT type test supple	ementary report			
Category of equipment	Traction and positive drive lift				
Type of equipment	Traction drive goods lift				
Name of product	Goods lift				
Model of product	FOVF				
Product number	SIT0813 Manufacturing date 2017-08				
Unified social cred	dit code of applicant	913301006091386249			
Applicant	Otis Electric Elevator Co	., Ltd.			
Registered address of applicant	No.28 Jiuhuan Road, Jian	nggan District, Hangzhou	, Zhejiang		
Manufacturer	Otis Electric Elevator Co.	., Ltd.			
Registered address of manufacturer	No.28 Jiuhuan Road, Jianggan District, Hangzhou, Zhejiang				
Manufacturing address	No.28 Jiuhuan Road, Jianggan District, Hangzhou, Zhejiang				
Test place	Otis Electric Elevator Co.	Otis Electric Elevator Co., Ltd.			
Sample state	No abnormal	Category of type test	Supplementary test		
Test date	2017-11-15				
Test condition	Ambient temperature:13.	6°C, relative humidity:46	5.9%,voltage: AC 399V		
Test basis	TSG T7007—2016 Regulation for type tests of lifts GB 7588—2003+XG1—2015 Safety rules for the construction and installation of electric lifts EN 81-1:1998 Safety rules for the construction and installation of lifts-Part 1: Electric Lifts				
Test conclusion	Test conclusion The type test of supplementary test items is certificated.				
Reported by: Type test agency accreditation					
Verified by:	FM	(米) (米)	o. T\$7610014-2021		
Issued by: 3 / 1/-					

## Lift Type Test Report

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## 1 Technical parameter and configuration of supplementary sample

Type of equipment		Traction drive goods lift	
Name of product		Goods lift	
Model of product		FOVF	
Rated speed	J	Up:0.50m/s, Down: 0.50m/s	
Rated load		6400kg	
Applicable e	nvironment	Indoor	
Number of p	assengers	1	
Explosion pr	otection grade	1	
Explosion pr	otection type	1	
Precautions excessive sp	against free fall, descent with beed of car	I	
Precautions	against creeping of car	Ì	
Equipment p	protection level	I	
Self-rescue modes of trapped firefighters from inside the car		1	
Additional firefighters car key switch		I	
Mode of price	rity recall	1	
Special purp	ose product	I	
Mode of land	ding door	Center opening two speed door	
Mode of car	door	Center opening two speed door	
Car dimensi	on	2500mm×3800mm×2500mm	
Well dimens	ion	3950mm×4160mm×36300mm	
Number of c	ar	Single	
Connection	mode of several cars	I	
Landings/sto	ops/doors	4/4/4	
Traveling he	eight	30.0m	
	Drive machine	In machine room	
Working	Control cabinet	In machine room	
areas	Emergency operations	I (1) The second	
	Test operations	1	

## National Elevator Inspection Lift Type Test Report

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## 1 Technical parameter and configuration of supplementary sample (continued)

	Drive mode	Traction drive
	Structure type	Three-phase asynchronous gear
	Model	YJ245D
	Manufacturer	Suzhou Torin Drive Equipment Co., Ltd.
	Arrangement mode and location	In upper machine room
	Mode of releasing brakes for emergency operation	Manual
Driving	Pitch diameter of traction sheave	<i>Φ</i> 650mm
machine	Reduction gear ratio	49:2
	Model of motor	YTTD225TVF2-4
	Manufacturer of motor	Suzhou Torin Drive Equipment Co., Ltd.
	Rated power	30kW
	Rated rotate speed	1440r/min
	Rated voltage	380V
	Rated current	57A
	Rated frequency	50Hz
	Insulation grade	F
	Number of ropes	8
	Suspension ratio	4:1
Suspension system	Suspension way of car	Top lift type
System.	Model of rope	13NAT8×19S+NF
	Mode of wrapping	Single
	Model of control cabinet	OH-CON
	Manufacturer of control cabinet	Otis Electric Elevator Co., Ltd.
Drive and control system	Location of control cabinet	In machine room
	Location of emergency and test operation panel(s)	/
	Model of drive device	CON8003Z550-4
	Manufacturer of drive device	Hangzhou Optimax Tech Co., Ltd.
	Model of controller	ALMCB

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## 1 Technical parameter and configuration of supplementary sample (continued)

	Manufacturer of controller	Hangzhou Optimax Tech Co., Ltd.
Drive and	Control device	Micro-computer
control	Speed control mode	Variable frequency speed control
system	Control mode	Selective collective control
	Communication mode	Serial
Landing door	Model	XTA-3A
locking	Manufacturer	Hangzhou Optimax Tech Co., Ltd.
devices	Specification	AC 110V, AC 0.8A
Car door	Model	XTA-CS02
locking	Manufacturer	Hangzhou Optimax Tech Co., Ltd.
devices	Specification	AC 110V, AC 0.8A
	Model	XSQ115-12
Overspeed governor	Manufacturer	Ningbo Shenling Lift Accessories Co., Ltd.
gerenie	Specification	Rated Speed≤0.63m/s
	Model	QS12
Safety gear	Manufacturer	Hangzhou Huning Elevator Parts Co., Ltd.
// deb	Specification	Rated speed≤0.63m/s, allowable mass≤15000kg
	Model	UCM-A
Safaty aircuita	Manufacturer	Hangzhou Optimax Tech Co., Ltd.
Safety circuits	Function	Control of leveling and re-leveling with doors open; unintended car movement protection means(Detecting subsystem)
Lift ascending	Model	ARB-B
car overspeed protection	Mode	Rope clip
means	Manufacturer	Hangzhou Huning Elevator Parts Co., Ltd.
Unintended	Model	HIC-UCMP01
car movement protection	Mode	Rope clip
means	Manufacturer	Zhejiang Xizi Heavy Industry Co., Ltd.

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1 Technical parameter and configuration of supplementary sample (continued)

	0			
	Model	FAA320R4		
	Number	2 sets		
Car buffer	Mode	Nonlinear Energy Storage Type		
	Manufacturer	Germany ACLA		
	Specification	Rated speed≤0.63m/s, allowable mass range: 855kg~6056kg		
	Model	FAA320R4		
	Number	2 sets		
Counter weight	Mode	Nonlinear Energy Storage Type		
buffer	Manufacturer	Germany ACLA		
	Specification	Rated speed≤0.63m/s, allowable mass range: 855kg~6056kg		
	Model	T127-2/B		
Car guide rail	Number	4 columns		
3-11-3-11	Manufacturer	Hangzhou Sanhang Monteferro Elevator Parts Co., Ltd.		
	Model	TK5		
Counter weight	Number	2 columns		
guide rail	Manufacturer	Hangzhou Sanhang Monteferro Elevator Parts Co., Ltd.		

## 2 Check supplementary technical document

No.	Items No.	Check items	Check results	Conclusion
		Product quality qualification certificate	Comply with requirements	Pass
		Install self-check report	Comply with requirements	Pass
		Install and use maintenance manuals	Comply with requirements	Pass
		Brake clearance adjustment and maintenance instructions	Comply with requirements	Pass
1	H5.1	The rescue program when the lift is outside of the unlocking region	Comply with requirements	Pass
		Design specifications with fire alarm detection system	Comply with requirements	Pass
		Equipment layout diagram, electrical principle diagram, installation and maintenance manuals of IC card system	/	/



## **NETEC** National Elevator Inspection and Testing Center Lift Type Test Report

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No.	Items No.	Check items	Check results	Conclusion
1	H5.1	Electrical control explanation for firefighters service	/	/
		Selection and calculations of unintended car movement protection means	Comply with requirements	Pass
2	H5.2	Selection and calculations of driving machine	Comply with requirements	Pass
		Selection and calculations of control cabinet	Comply with requirements	Pass
		The kinetic energy of horizontally sliding doors	Comply with requirements	Pass
3	H5.3	General design diagrams and contents, Design diagrams of components	Comply with requirements	Pass
		Electric schematic diagrams, terminal connection chart and symbol description	Comply with requirements	Pass
		H5.4.1 Type test reports and certificates	Comply with requirements	Pass
4	H5.4	H5.4.2 Other demonstrate documents	Comply with requirements	Pass
5	H5.7	Diagram of car suspension mode	Comply with requirements	Pass
		Measure for preventing dragging glass door	1	1
6	Diagram of panel suspension, retainers and guides		Comply with requirements	Pass
6	H5.8	Schematic structure and installation of Car door locking devices	Comply with requirements	Pass
		Schematic structure and installation of protection device for opening the car door	1	1
7	H5.9	Additional requirements for firefighter lift	1	1

## Lift Type Test Report

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## 3 Check supplementary sample and test

No.	Items No.	Check and Test items	Check and Test results	Conclusion
1	H6.1	H6.1.8.3 Safety circuits	1	1
2 H6.2		H6.2.5 Landing door and car door bypass device	Comply with requirements	Pass
		H6.2.7 Emergency rescue	Comply with requirements	Pass
3	H6.3	H6.3.8 Unintended car movement protection means	Comply with requirements	Pass
		H6.3.12.14 The product brand	Comply with requirements	Pass
4	LIG E	H6.5.8 Locking and closed landing door check	Comply with requirements	Pass
4 H6.5	ПО.Э	H6.5.9 Locking and closed car door check	Comply with requirements	Pass
		H6.9.1 Input signals	Comply with requirements	Pass
		H6.9.2 Stopped position of the lift	Comply with requirements	Pass
		H6.9.3 Prohibition sign	Comply with requirements	Pass
5	H6.9	H6.9.4 Interface requirements between the fire alarm system and the lift control system	Comply with requirements	Pass
		H6.9.5 Behaviour of the lift on the receipt of a fire detection signal	Comply with requirements	Pass
		H6.9.6 Designated landing	Comply with requirements	Pass
		H6.12.1 Power supply control	1	/
		H6.12.2 Automatic exit function	1	1
6 H6.12	H6.12	H6.12.3 Use and prevent operation function	1	/
		H6.12.4 Marking	1	1
7	H6.21	H6.21.1 Traction and positive drive lift	1	/
8	H6.22 Overload operation test		Comply with requirements	Pass

14 11/2

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National Elevator Inspection and Testing Center

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Undertaker signature			
Change date			
After the change			
Before the change			
ltem			_
No.			

4 Change information of type test report





## **Special Equipment Type Test Report**

Report No. T3-324-11-006

Category of Equipment: Goods Lifts

**Type of Equipment:** 

**Vehicle Lifts** 

Name of Product:

Vehicle Lifts

**Model of Produce:** 

TQJ

Applicant:

Xizi Otis Elevator Co., Ltd.

Manufacturer:

Xizi Otis Elevator 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.
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- 5. Type test report or certificate can not be reproduced except in full, without written approval of NETEC.
- 6. Type test report or certificate including annex is invalid if altered.
  - 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.
  - 9. Type test report and certificate are invalid from the issue date. The term of validity is according to TSG T7001 Rules for Type Test of Elevators(tryout) promulgated by General Administration of Quality Supervision Inspection and Quarantine of the People's Republic of China.

10. It should be subject to the Chinese version, while the English version is for reference only.

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## **Type Test Report**

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	, , 1	.,			
Name of product		Vehicle Lifts			
Model of product		TQJ			
Serial No. of sample		2011070383	Production date	2006-06-30	
Main techi	nical	Rated speed	0.50m/s		
paramet	er	Rated load	5000kg		
A P 1	Name	Xizi Otis Elevator Co., Ltd.			
Applicant	Address	No.28 Jiuhuan Road, Jianggan District, Hangzhou			
	Name	Xizi Otis Elevator Co., Ltd	•		
Manufacturer	Address	No.28 Jiuhuan Road, Jian	ggan District, Hangzh	nou	
Installation place	Zhejiang	YOTRIO group Co., Ltd.			
Test place	Zhejiang YOTRIO group Co., Ltd.				
Sample state	No abno	rmal			
Test date	2011-08	-10,2011-08-19	Test category	Type test	
Test condition	Comply	with requirement	Test item	All application items	
Test basis	Rules for Type Test of Elevators (tryout) Rule for Type Test of Machine Roomless Lifts (tryout) GB 7588 -2003(eqv EN 81-1:1998)				
Test conclusion	The type test is certificated.				
Note	Issued d	ate of the Chinese version	Aug. 30, 2011		

Reported by:

Verified by: ( F) Issued by: 3745

思想依古专用章

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#### LIFT SAMPLE'S TECHNICAL PARAMETERS AND CONFIGURATION

Model and name TQJ Vehicle Lifts Applicable environment Indoor						environment	Indoor
Rated speed	0.50m/s		Rated I	oad	5000kg	Passenger	1
	,	ne type 60HT		Manufacture	Xizi Otis Elevator Co., Ltd.		
	Structure type		Three-phase asynchronous gear		Arrangement of drive machine	Upper machine	
Traction	Pitch di	ameter	650mm		Reduction ratio	49:2	
machine	Motor	model	YTTD225TV	P2- <b>4</b>	Manufacture	Xizi Otis Elevat	or Co., Ltd.
	Rated	power	30kW		Rated speed	1440r/min	
	Rated v	voltage	380V		Rated current	62A	
	Rated fre	equency	50Hz		Insulation class	F	
	Number o	f ropes	8		Suspension Ratio	4:1	
Suspension system	Structure	e and mod	el of suspensi	on ropes	φ13 8×19S+FC		
oyotom .			ing mode		Single		
	Control cabinet installation position		Upper machine ro	om			
	Control cabinet model		OH-CON850	1	Manufacture	Xizi Otis Elevat	or Co., Ltd.
Drive and control	Drive device model		CON8003Z3	70-4	Manufacture	Hangzhou Optimax Tech Co., Lt	
system	Controller model		LMCB		Manufacture Trangenou Spaniax 16		max rech co., Lid
	Control device		Micro-compu	ter	Speed control mode	AC variable frequency control	
	Control mode		Collective selective		Communication mode	Serial	
Locking devices	Mod	del	MKG161-01		Manufacture	Ningbo Shenlin Co., Ltd.	g Lift Accessories
Overspeed governor	Мо	del	TAC20602A4	101	Manufacture	SPAIN OTIS	
Safety gear	Mod	del	QS8		Manufacture	Hangzhou Hun	ing Elevator
Ascending car	Mod	del	RB106A-D		Manufacture	Accessories (	Co., Ltd.
overspeed protection	Acting	mode	Acting on the	suspensi	on ropes		
		Car	FAA320R4	2set	Manufacture		
Buffers	Model	Cwt.	FAA320R4	1set	Manufacture	GERMANY ACLA	4
100	1	Car	T127-1/B, Tk	(5A	Manufacture	Hangzhou Sanha	ang Monteferro
Guide rails	Model	Cwt.	TK5		Manufacture	Elevator Parts Co	o., Ltd.
Landing doors	Four-panel center opening door		Car doors	Four-panel cente	r opening door		
Clear Car dimension	A×B×H 3400mm×5580mm×2900mm		Well dimension	C×D×H 4980mm×6300m	m×21900mm		
Landing/stop	3/3/4				Traveling height	13.8m	

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No.	Items No.	Test items	Test results	Conclusions
1	1.1	Mounting of main switches	Comply with requirements	Pass
2	1.2	Model, markings, install position of main switches	Comply with requirements	Pass
3	1.3	Safeguard of main switches in the open position, to ensure no inadvertent operation	Comply with requirements	Pass
4	1.4	(In the case of a group of lifts)After the opening of the main switcher, parts of circuits remain live	1	1
5	1.5	Connection of any capacitors to correct the power factor	1	1
6	2.1	The electric lighting supplies to the car, the well, the machine and pulley rooms	Comply with requirements	Pass
7	2.2	The supply and type to socket outlets required on the car roof, in the machine and pulley rooms and in the pit	1	1
8	2.3	A switch for lighting and socket outlets of the lift car	Comply with requirements	Pass
9	2.4	Lighting switches in the machine or pulley rooms	Comply with requirements	Pass
10	2.5	Lighting switch in the well	Comply with requirements	Pass
11	2.6	Short circuit protection of each circuit controlled by the switches laid down in 2.3~2.5	Comply with requirements	Pass
12	3.1	Phase break and reversal protection device	Comply with requirements	Pass
13	3.2	Stopping device	Comply with requirements	Pass
14	3.3	Stopping device in the car(in the car of lifts with docking operation)	1	1
15	3.4	Type of stopping device	Comply with requirements	Pass
16	4.1	Motor supplied and controlled directly from a.c or d.c. mains	1	1
17	4.2	A.c. or d.c. motor supplied and controlled by static elements	Comply with requirements	Pass
18	4.3	Motor supplied and controlled using a "Ward-Leonard" system	1	1
19	4.4	Check device of drive machine stopping state	Comply with requirements	Pass
20	5.1	Working state of the brake	Comply with requirements	Pass
21	5.2	Controlling of the brake	Comply with requirements	Pass
22	5.3	Brake without supplementary delay	Comply with requirements	Pass
23	5.4	When the motor of the lift is likely to function as a generator, protecting against electric device operating the brake to be fed by the driving motor	Comply with requirements	Pass
24	6.1	Protecting against overloads of motors (directly connected to the mains)	1	1
25	6.2	Protecting against overloads of motors basis of increase of the temperature of the motor windings	Comply with requirements	Pass

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No.	Items No.	Test items	Test results	Conclusions
26	6.3	Protecting against overloads of motors has windings supplied by different circuits	1	1
27	6.4	Protecting against overloads of motors supplied from d.c. generators driven by motors	1	1
28	6.5	Protecting against short-circuiting of motors (directly connected to the mains)	1	1
29	6.6	Motor run time limiter of traction drive lifts	Comply with requirements	Pass
30	6.7	Function of motor run time limiter	Comply with requirements	Pass
31	6.8	Resetting of motor run time limiter	Comply with requirements	Pass
32	6.9	Relation of motor run time limiter and the inspection operation or the emergency electrical operation	Comply with requirements	Pass
33	7.1	Protection against electrical faults	Comply with requirements	Pass
34	7.2	Protection measure of the ear thing to the metalwork or the earth of a circuit containing an electric safety device	Comply with requirements	Pass
35	8.1	Electric safety devices	Comply with requirements	Pass
36	8.2	Parallel of electric device and electric safety device	Comply with requirements	Pass
37	8.3	Request to gathering information device connected electric safety chain	1	1
38	8.4	Dependability of signal emanating from an electric safety device	Comply with requirements	Pass
39	8.5	Circuits of record or delay signals		1
40	8.6	Function of electric safety device	Comply with requirements	Pass
41	8.7	Operation of electric safety device	Comply with requirements	Pass
42	8.8	Transmitter elements of safety circuits	1	1
43	9.1	Positive separation of safety contacts	Comply with requirements	Pass
44	9.2	Categories of safety contacts or the degree of protection of the enclosure	Comply with requirements	Pass
45	9.3	Clearances or creepage distances of safety contacts	Comply with requirements	Pass
46	9.4	Distance after separation between the contacts in the case of multiple breaks	1	1
47	9.5	Type test of safety circuits containing electronic components	1	1
48	9.6	Printed circuit board	1	1
49	10.1	Electromagnetic compatibility of electric installations and appliances	1	1
50	10.2	Protection of electric appliances in the machine and pulley rooms	IP2X	Pass
51	10.3	Insulation resistance between each live conductor and earth	>200MΩ	Pass
52	10.4	Voltage between conductors or between conductors and earth for control and safety circuits	Comply with requirements	Pass

### **Type Test Report**

and Testing Center Conclusions Items No. Test results No: Test items Separate of the neutral conductor and the 10.5 Comply with requirements Pass 53 protection conductor Comply with requirements Pass 54 10.6 Traveling cables Cross-sectional area of conductors to  $0.75 \text{mm}^2$ 10.7 **Pass** 55 electric safety device of doors Marks of some connection terminals 56 10.8 remain live after the opening of the main Comply with requirements **Pass** switch or switches of a lift Connectors and devices of the plug-in 10.9 1 57 type placed in safety circuits Comply with requirements Control of lift operations **Pass** 58 11.1 Pass 11.2 Comply with requirements 59 Type test of lift control cabinets Control of leveling and re-leveling with 60 12 doors open Comply with requirements Pass 61 13.1 Control of inspection operation Special switches for controlling the 1 62 13.2 mechanism of doors from the car roof Control device to prevent overload in the 63 14.1 Comply with requirements **Pass** Comply with requirements Pass 64 14.2 State of the lift in the event of overload Priorities and signal for lifts with manual Automatic doors 1 65 15.1 doors 1 66 15.2 Priorities of no-collective control Collective control Landing signal in the case of collective 67 15.3 Comply with requirements **Pass** control 1 1 68 16.1 Control of docking operation Height between the landing door header 1 and the floor of the car or landing door 1 69 16.2 state in the case of docking operation 70 17.1 Device for manual emergency movement Comply with requirements **Pass** Mark of device for manual emergency **Pass** 71 17.2 Comply with requirements movement Electric safety device of the removable 72 17.3 Comply with requirements Pass wheel Mark checking easily from the machine room whether the car is in an unlocking Comply with requirements Pass 73 17.4 zone **Pass** 74 17.5 Control of emergency electrical operation Comply with requirements **Pass** Comply with requirements 75 18.1 Emergency alarm device in the car 76 18.2 Power for emergency device Comply with requirements **Pass** 77 Type of emergency alarm device in the car Comply with requirements **Pass** 18.3 An intercom system, or similar device 1 78 18.4 between inside the car and the machine 1 room if the lift travel exceeds 30m Alarm device for persons working in the 79 18.5 Comply with requirements Pass well being trapped

One machine of each lift own

80

19.1

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**Pass** 

Comply with requirements

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No.	Items No.	Test items	Test results	Conclusions
81	19.2	Drive methods	Traction drive	Pass
82	19.3	This brake on its own shall be capable of stopping the machine when the car is travelling downward at rated speed and with the rated load plus 25 %	Comply with requirements	Pass
83	19.4	Rated load one set braking action test	Comply with requirements	Pass
84	20.1	Protection of traction sheaves, pulley and sprockets	Comply with requirements	Pass
85	20.2	Request for protection devices	Comply with requirements	Pass
86	20.3	Protection of rotating parts	Comply with requirements	Pass
87	21.1	Suspension of cars and counterweights or balancing weights	Comply with requirements	Pass
88	21.2	Number of ropes or chains	6 ropes	Pass
89	21.3	Diameter or the other characteristics of suspension ropes	16mm	Pass
90	21.4	Ratio between the pitch diameter of traction sheaves, pulley or drum and the nominal diameter of the suspension ropes	Pitch diameter: 725mm Rope diameter: 16mm Ratio: 45.3	Pass
91	21.5	Calculation of safety factor of suspension ropes	Comply with requirements	Pass
92	21.6	Safety factor of suspension chains	Suspension ropes	1
93	22	Traction conditions	Comply with requirements	Pass
94	23.1	Checking of junction between rope and the rope termination	Comply with requirements	Pass
95	23.2	Checking of junction between chain and the chain termination	Rope termination	1
96	23.3	Least breaking load of junction between rope (chain) and the rope (chain) termination	Comply with requirements	Pass
97	23.4	Fixing of the ropes on the drum for positive drive lifts	Traction drive	1
98	23.5	Automatic device for equalizing the tension of suspension ropes or chains	Comply with requirements	Pass
99	23.6	Working state of springs for equalizing the tension	Comply with requirements	Pass
100	23.7	Electric safety device for preventing abnormal relative extension of one rope or chain, in the case of two ropes or two chains suspension of the car	Number of ropes>2	/
101	23.8	Preventing loose measure of the devices for adjusting the length of ropes or chains, an electric safety device to stop the lift in case of abnormal relative extension of one rope or chain	Comply with requirements	Pass
102	23.9	Electric safety device for preventing abnormal relative extension of one rope or chain, in the case of positive drive lifts	Traction drive	1
103	24.1	Drum for positive drive lifts	Traction drive	1
				-

## **Type Test Report**

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No.	Items No.	Test items	Test results	Conclusions
104	24.2	When the car rests on its fully compressed buffers, length of rope in the grooves of the drum	Traction drive	1
105	24.3	Layer of rope wound on the drum	Traction drive	/
106	24.4	Angle of deflection (fleet angle) of ropes in relation to the grooves	Traction drive	1
107	25.1	Use condition of compensating ropes	1	1
108	25.2	Anti-rebound device of compensating ropes	1	1
109	26.1	Tripping speed of an overspeed governor	Comply with requirements	Pass
110	26.2	Electrical safety device to initiate the stopping of the lift machine before the car speed	Comply with requirements	Pass
111	26.3	Tripping speed of an overspeed governor for a counterweight or balancing weight safety gear	1	1
112	26.4	Tensile force in the overspeed governor rope produced by the governor, when tripped	Comply with requirements	Pass
113	26.5	Tensioning of overspeed governor rope or guiding of tensioning pulley(or its tensioning weight)	Comply with requirements	Pass
114	26.6	Electric safety device for breakage or excessive rope stretch of the governor rope	Comply with requirements	Pass
115	26.7	Seal of adjustable parts or mark of rotation direction on the overspeed governor	Comply with requirements	Pass
116	26.8	Electric safety device for overspeed governor does not automatically reset itself	Comply with requirements	Pass
117	26.9	Accessibility and reachability for overspeed governor	Comply with requirements	Pass
118	26.10	Overspeed governor located in the well	Located in machine room	1
119	26.11	Type test of overspeed governor	Comply with requirements	Pass
120	27.1	Safety gear capable of operating in the car downward direction	Comply with requirements	Pass
121	27.2	Type of safety gear	Instantaneously type	Pass
122	27.3	Type of safety gears, if the car carries several safety gears	1	1
123	27.4	Safety gear of counterweight weight or balance weight	1	1
124	27.5	Control for tripping safety gear of the car, counterweight weight or balance weight	Comply with requirements	Pass
125	27.6	Inclination of the car floor, when the car safety gear operates	Comply with requirements	Pass
126	27.7	Release of safety gear has tripped	Comply with requirements	Pass
127	27.8	Electric safety device of safety gear on the car	Comply with requirements	Pass
128	27.9	Safety gears shall not be used as guide shoes	Comply with requirements	Pass

## **Type Test Report**

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No.	Items No.	Test items	Test results	Conclusions
129	27.10	Seal of adjustable safety gear	Comply with requirements	Pass
130	27.11	Matching of parameter between the safety gear and the lift	Comply with requirements	Pass
131	27.12	Type test of safety gear	Comply with requirements	Pass
132	28.1	Position of buffers	Comply with requirements	Pass
133	28.2	Type of buffers	Energy dissipation buffers	Pass
134	28.3	Stroke of reduced buffers	1	1
135	28.4	Monitoring the normal slowdown of the machine in case of reduced buffer stroke	1	1
136	28.5	Matching of parameter between buffer and lift	Comply with requirements	Pass
137	28.6	Type test of buffer	Comply with requirements	Pass
138	29.1	Ascending car overspeed protection means	Comply with requirements	Pass
139	29.2	Action place of ascending car overspeed protection means	Comply with requirements	Pass
140	29.3	Driving of ascending car overspeed protection means	compression spring	1
141	29.4	Controlling of ascending car overspeed protection means	Comply with requirements	Pass
142	29.5	Retardation of the empty car during the stopping phase	Comply with requirements	Pass
143	29.6	Speed monitoring element of the lift to cause the ascending car overspeed protection means to actuate	Overspeed governor	Pass
144	29.7	Electric safety device of ascending car overspeed protection means	Comply with requirements	Pass
145	29.8	Release of ascending car overspeed protection means has been activated	Comply with requirements	Pass
146	29.9	Type test of ascending car overspeed protection means	Comply with requirements	Pass
147	30.1	Setting place of final limit switches	Comply with requirements	Pass
148	30.2	Actuating devices of normal terminal stopping and final limit switches	Comply with requirements	Pass
149	30.3	Actuation control of final limit switches in the case of positive drive lifts	I	1
150	30.4	Actuation control of final limit switches in the case of traction drive lifts	Comply with requirements	Pass
151	30.5	Method of operation of final limit switches	Comply with requirements	Pass
152	30.6	Return to service of the lift after the operation of final limit switches	Comply with requirements	Pass
153	31.1	Clearance between panels, or between panels and uprights, lintels or sills when closed landing doors	Comply with requirements	Pass
154	31.2	Height and width of the landing doors	Height: 2.800m Width: 2.500m	Pass
155	31.3	Height of car entrance	Height: 2.800m	Pass
156	31.4	Setting of car door	Comply with requirements	Pass

## **Type Test Report**

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No.	Items No.	Test items	Test results	Conclusions
157	31.5	Type of car door	Imperforate	Pass
158	31.6	Car door and car entrance	Comply with requirements	Pass
159	31.7	Clearance between panels, or between panels and uprights, lintels or sills when closed car door	Comply with requirements	Pass
160	31.8	Horizontal distance between the sill of the car and sill of the landing doors	30mm	Pass
161	31.9	Horizontal distance between the car door and the closed landing doors or the access distance between the doors during the whole of their normal operation	0.035m	Pass
162	31.10	Any gap between the closed doors in the case of the combination of a hinged landing door and a folding car door	1	1
163	32.1	Clearance between panels, or between panels mechanical strength of and uprights, lintels or sills under the application of a manual force of 150N	Comply with requirements	Pass
164	32.2	Mechanical strength of landing doors with their locks	Comply with requirements	Pass
165	32.3	Mechanical strength of car door	Comply with requirements	Pass
166	33.1	Fixing of glass door panels, dimensions of glass, pendulum shock test of glass door	1	1
167	33.2	Fixing of glass in doors	1	1
168	33.3	Type test of glass door	1	1
169	34.1	Request to avoid the risk of shearing during operation in case of automatic power operated sliding doors	Comply with requirements	Pass
170	34.2	Force to prevent the door closing in case of automatic power operated horizontally sliding landing doors or car door	Comply with requirements	Pass
171	34.3	Re-opening protective device of landing doors and car door	Light-screen	Pass
172	34.4	Opening force for folding landing doors and car door of automatic power operated horizontally sliding	1	1
173	34.5	Conditions of power closing of vertically sliding landing doors and car door	I	1
174	34.6	Prevent of other types of doors	1	1
175	34.7	Reversal of closing movement of car door of automatic power operated	Comply with requirements	Pass
176	34.8	Request of landing doors with manual opening	1	1
177	34.9	Striking stops of hinged doors	1	1
178	34.10	Distance between any outer edge of the folding door and the recess	1	1
179	35.1	Operation with landing doors open in normal operation or unlocking zone	unlocking zone: 520m Comply with requirements	Pass
180	35.2	Safety prevention of landing doors open or operation permitted	Comply with requirements	Pass

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No.	Items No.	Test items	Test results	Conclusions
181	35.3	Effective locking of the landing door preceding the movement of the car or electric safety device of proving locking	Comply with requirements	Pass
182	35.4	Engaged length of the locking elements	Comply with requirements	Pass
183	35.5	Element of the electric safety device proving the locked condition of the door panels or connection of locking element	Comply with requirements	Pass
184	35.6	Locking request for hinged doors	No-hinged doors	1
185	35.7	Effect and maintained of the locking action of landing doors	Comply with requirements	Pass
186	35.8	Protection and inspection of lock device	Comply with requirements	Pass
187	35.9	Type request of the fixing screws for the cover in the case where the lock contacts	Comply with requirements	Pass
188	35.10	Open or automatic closing of landing doors locks	Comply with requirements	Pass
189	35.11	Electrical safety device for proving the closed condition of the landing door	Comply with requirements	Pass
190	35.12	Devices for proving the locked condition and the closed condition of the landing door coupled with car door	Comply with requirements	Pass
191	35.13	Place of electrical safety device for proving the closed condition of the hinged landing door	1	1
192	35.14	Devices for proving the locked condition and the closed condition of the landing door	Comply with requirements	Pass
193	35.15	Place of safety and locked devices for sliding landing door comprises several directly mechanically linked panels	1	1
194	35.16	Condition of permit to lock only one panel for sliding landing door comprises several indirectly mechanically linked panels	Comply with requirements	Pass
195	35.17	Closing of automatically operated landing doors	Comply with requirements	Pass
196	35.18	Type test of landing door locking devices	Comply with requirements	Pass
197	36.1	Safety protection or operation when a car door is open	Comply with requirements	Pass
198	36.2	Electrical safety device for proving the closed condition of the car door	Comply with requirements	Pass
199	36.3	Type test and request of car door locking devices	1	1
200	36.4	Place of safety and locked devices for sliding car door comprises several directly mechanically linked panels	1	/
201	36.5	Condition of permit to place the electrical safety device on a single panel for sliding car door comprises several indirectly mechanically linked panels	1	1
202	36.6	To open the car door or landing door by hand with car stopped and the supply to the door operator (if any) disconnected	Comply with requirements	Pass

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results Conclu

No.	Items No.	Test items	Test results	Conclusions
203	36.7	Force necessary to open the car door by hand in the unlocking zone	Comply with requirements	Pass
204	36.8	Force to open the car door with the lift in motion, the rated speed of which exceeds 1m/s	1	1
205	37.1	Fault protection of landing doors and car door	Comply with requirements	Pass
206	37.2	Guides of the landing doors	Comply with requirements	Pass
207	37.3	Fixing for panels of vertically sliding landing door	1	1
208	38	Type test of fire-resistant landing door	1	1
209	39.1	Interior clear height of the car	2.900m	Pass
210	39.2	Number of passengers	Vehicle lifts	1
211	39.3	Rated load and max. available car area of goods lifts and non-commercial auto lifts, effective control of excess area of goods lifts	19.5279m²	Pass
212	39.4	Rated load and max. available car area of passenger lifts and sickbed lifts	I	1
213	40.1	Enclosed and permissible openings of the car	Comply with requirements	Pass
214	40.2	Mechanical strength of the car walls	Comply with requirements	Pass
215	40.3	Request of walls with glass and handrail	A 1	1
216	40.4	Fixing of the glass in the wall	1	1
217	40.5	Fitting of apron of car sill	Width: 2540mm Angle: 60° Projection: 100mm Vertical height: 760mm	Pass
218	40.6	In the case of a lift with a docking operation, the height of the vertical portion of apron	1	1
219	41.1	Dimension of an emergency trap door in the car roof	I	1
220	41.2	Dimension of emergency doors in the car	1	1
221	41.3	Request for emergency trap doors or doors	1	1
222	42.1	Request for roof	Comply with requirements	Pass
223	42.2	Clear area for standing	Comply with requirements	Pass
224	42.3	Balustrades of car roof	Comply with requirements	Pass
225	42.4	Composing or height of balustrades	Comply with requirements	Pass
226	42.5	Place of handrail and balustrades	Comply with requirements	Pass
227	42.6	Protection of pulleys fixed to the car	Comply with requirements	Pass
228	42.7	Gap between the car roof and the header of a landing door	1	1
229	43.1	Ventilation area of cars with imperforate doors	Comply with requirements	Pass

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/ Pass Pass / Pass
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1
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Pass

## Type Test Report

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No.	Items No.	Test items	Test results	Conclusions
254	47.6	Horizontal distance between the inner surface of the lift well and the sill, door frame of the car or closing edge of car sliding door	Comply with requirements	Pass
255	48.1	Access door to pit	1	1
256	48.2	Place of inspection and emergency doors, and inspection traps to the well	1	1
257	48.3	Opened-closed or strength of inspection and emergency doors, and inspection traps to the well	1	1
258	48.4	Electrical safety device for proving the closed condition of inspection and emergency doors, and inspection traps to the well	1	1
259	49.1	Rigid screen of the traveling area of the counterweight or the balancing weight	Comply with requirements	Pass
260	49.2	Rigid screen of the well contains several lifts	Single lift	1
261	50.1	Top clearances for traction drive lifts	Comply with requirements	Pass
262	50.2	Guided travel of the counterweight guide rail when the car rests on its fully compressed buffers	Comply with requirements	Pass
263	50.3	Clearance of reduced buffer stroke	1	1
264	50.4	Clearances for lifts which are fitted with compensating ropes having a tensioning pulley equipped with an anti-rebound device	1	1
265	51.1	Guided travel of the car upward from the top floor until it strikes the upper buffers	1	1
266	51.2	Lengths of the balancing weight guide rail when the car rests on its fully compressed buffers	1	1
267	51.3	Top clearances for positive drive lifts	1	1
268	52.1	Setting request for pit	Comply with requirements	Pass
269	52.2	Method to enter pit	Comply with requirements	Pass
270	52.3	Space between the bottom of the pit and car when the car rests on its fully compressed buffers	Comply with requirements	Pass
271	53	Intensity and lighting of the well	Comply with requirements	Pass
272	54.1	Setting for lift machines, their associated equipment and pulleys	Comply with requirements	Pass
273	54.2	Condition for installing traction sheave in the well	I	/
274	54.3	Headroom of the well or diverter pulleys be installed above the car roof	1	1
275	54.4	Temperature of the machine room	Comply with requirements	Pass
276	54.5	Metal supports or hooks in the machine room	Comply with requirements	Pass

## **Type Test Report**

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No.	Items No.	Test items	Test results	Conclusions
277	54.6	Temperature of the pulley room, measure for preventing frost or condensation	1	1
278	55.1	Access to the interior of the machine and pulley rooms	Comply with requirements	Pass
279	55.2	Safety access for persons to machine and pulley rooms	Comply with requirements	Pass
280	55.3	Doors and trap doors of machine room	Comply with requirements	Pass
281	55.4	Doors and trap doors of pulley room	1	1
282	55.5	Dimensions of holes in the slab, machine and pulley rooms floor	Comply with requirements	Pass
283	56.1	Clear height at working areas or clear horizontal area for manual emergency operation	Comply with requirements	Pass
284	56.2	Clear height in machine room or width of the access ways	Comply with requirements	Pass
285	56.3	Clear vertical distance above the rotation parts of the machine	Comply with requirements	Pass
286	56.4	Dimensions of pulley room	1	1
287	56.5	Height or working area of pulley room	1	1
288	57.1	Ventilation of machine room	Comply with requirements	Pass
289	57.2	Lighting of machine room	Comply with requirements	Pass
290	57.3	Lighting of pulley room	1	1
291	58.1	Total requests for labels, notices, markings and operating instructions	Comply with requirements	Pass
292	58.2	Labels in the car	Comply with requirements	Pass
293	58.3	Operating directions or display in the car	Comply with requirements	Pass
294	58.4	Permanent markings of walls or doors with glass	1	1
295	58.5	Especial function or instructions in the car	1	1
296	58.6	Operating instructions on the car roof	Comply with requirements	Pass
297	58.7	Notices of the main switch(es) several lifts and light switch (es)	Comply with requirements	Pass
298	58.8	Program or explaining about emergency operation in the machine room	Comply with requirements	Pass
299	58.9	Max. permissible load on the lifting beam or hooks in the machine room	Comply with requirements	Pass
300	58.10	Stopping device in the pulley room	1	1
301	58.11	Stopping device in the pit	Comply with requirements	Pass
302	58.12	Notices fixed to the outside of the machine and pulley rooms or trap-doors	Comply with requirements	Pass
303	58.13	Notice near the inspection doors outside the well	1	1
304	58.14	Symbol or color of the button of the alarm switch	Comply with requirements	Pass
305	58.15	Sign attached unlocking triangle key	Comply with requirements	Pass
306	58.16	Distinguishing landing doors with manual opening and other adjacent doors	1	1

## **Type Test Report**

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No.	Items No.	Test items	Test results	Conclusions
307	58.17	Sign of rated load on goods lifts	Comply with requirements	Pass
308	58.18	Data plate of overspeed governor	Comply with requirements	Pass
309	58.19	Data plate of buffer other than energy accumulation type buffers	1	1
310	58.20	Data plate of safety gear	Comply with requirements	Pass
311	58.21	Data plate of locking device	Comply with requirements	Pass
312	58.22	Data plate of ascending car overspeed protection means	Comply with requirements	Pass
313	59.1	Car running speed	v: 0.514m/s 102.8%v <sub>rated</sub> See appendix 1	Pass
314	59.2	Machine room noise	Average value: 76.5dB(A) See appendix 2	Pass
315	59.3	Noise of opening or closing doors course for passenger lift	1	1
316	59.4	Running noise in car for passenger lift	1	1
317	59.5	Balancing coefficient	Testing value: 0.46 See appendix 1	Pass
318	59.6	Over loading running test	Comply with requirements	Pass
319	59.7	Acceleration and retardation for passenger lift	I	/
320	59.8	Average acceleration and retardation for passenger lift	1	1
321	59.9	Time of opening or closing doors for passenger lift	1	1
322	59.10	Acceleration of vertical librating or horizontal librating for passenger lift	1	1
323	59.11	Leveling precision	Max. deviation: +2.0mm See appendix 2	Pass
324	59.12	Safety gear test for car or counterweight or balancing weight	Comply with requirements	Pass
325	59.13	Accessional test of exceeding area for good lift	1	1
326	59.14	Accessional test of auto lift	Comply with requirements	Pass
327	60.1	Basic requests for the lift in the especial environment or exposing to nature environment	1	1
328	60.2	Risk estimate for the lift in the especial environment or exposing to nature environment	1	1

#### **NETEC**

National Elevator Inspection and Testing Center

### **Type Test Report**

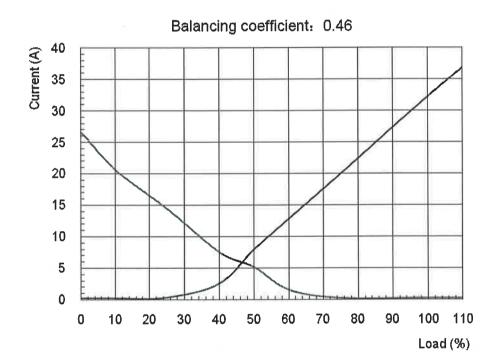
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Appendix 1 Test data of running speed and balancing coefficient

#### 1.1 Running speed

Direction Items		Up	Down	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down	
	%	(	0	2	25	4	.0	5	50 75		100		110			
Load	kg	(	0	12	250	20	2000		2500		3750		5000		5500	
Current	A	0.2	26.6	0.3	14.4	2.6	7.5	8.0	5.1	19.9	0.2	32.2	0.2	36.8	0.2	

#### 1.2 Balancing coefficient



#### **NETEC**

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## **Type Test Report**

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Appendix 2 Test data of noise, leveling precision.

#### 2.1 Noise

Unit: dB (A)

Landing	Car	doors	Landing	g doors	Dealement		ning nois	e in car	Machine Rackground	
station	Opening	Closing	Opening	Closing	Background	Up	Down	Background	room	Background
1	1	1	1	1	1				F: 76.5	
1	1	1	1	1	1	1	1	1	R: 75.1	50.3
1	1	1	1	1	1				U: 70.8	
Standard		1			1			<b>\</b>	<b>≤80</b>	
Note	1									

#### 2.2 Leveling precision

Unit: mm

Stopping	Direction	No load	Rated load				
13	Up	+1.0	+1.0				
3—1	Down	-2.0	-1.0				
1—2	Up	+2.0	+2.0				
1—2 2—1	Down	-2.0	-2.0				
Standard		±15					
Note		1					



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