



中国认可  
国际互认  
检测  
TESTING  
CNAS L1061



170908000850



Report No. ETC22F320BC002

# Special Equipment

## Type Test Report

### (Lifts)

<b>Category of equipment:</b>	Lift safety protection component
<b>Type of equipment:</b>	Safety gear
<b>Name of product:</b>	Progressive safety gear
<b>Model of product:</b>	CYAQ11C
<b>Manufacturer:</b>	ZhenJiang ChaoYang Electromechanical Scientifical Co.,Ltd
<b>Applicant:</b>	ZhenJiang ChaoYang Electromechanical Scientifical Co.,Ltd
<b>Category of type test:</b>	Supplementary test
<b>Test date:</b>	2022-11-09

Shanghai Jiao Tong University Elevator Test Center

# NOTICES

- 1、 The report is the result of the type test according to the TSG T7007-2022 *Regulation for Type Test of Lifts*.
- 2、 The report shall be printed by computer and be invalid with any modification.
- 3、 The report will be invalid without the signature of approver、 verifier and tester .It will also be invalid without the approval certificate、 the cross-page official stamp of the type test entity.
- 4、 Type test report is only valid for the sample.
- 5、 It is forbidden to copy the report partly without the permission of the type test organ. The partly copied report will be invalid.
- 6、 Any dissents to the report must be put forward to the type test organ within 15 working days from receiving it. Otherwise, it is considered that the report is accepted.
- 7、 The test samples shall be handled according to relevant regulations except that they are not returned due to legitimate losses.
- 8、 The report is made in quadruplicate, one for the type test organ and three for the applicant.
- 9、 Type test report and certificate should be subject to the Chinese version, while the English version is for reference only.
- 10、 The addresses of Elevator Test Center, Shanghai Jiaotong University are as follows:

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Category of equipment	Lift safety protection component	Type of equipment	Safety gear
Name of product	Progressive safety gear	Model of product	CYAQ11C
Serial number of product	2#	Date of manufacture	2022-11-01
Applicable product model(s)	N/A		
Applicant	ZhenJiang ChaoYang Electromechanical Scientifical Co.,Ltd		
Registered address of applicant	No.688, Youfang town, Yangzhong City, Jiangsu Province ,China		
Unified social credit code	91321100608892529A		
Manufacturer	ZhenJiang ChaoYang Electromechanical Scientifical Co.,Ltd		
Registered address of manufacturer	No.688, Youfang town, Yangzhong City, Jiangsu Province ,China		
Unified social credit code	91321100608892529A		
Manufacturing address	No.688, Youfang town, Yangzhong City, Jiangsu Province ,China		
Location of test	No.688, Youfang town, Yangzhong City, Jiangsu Province ,China		
State of sample	No abnormal	Test date	2022-11-09
Test conditions	No abnormal	Category of type test	Supplementary test
Test basis	TSG T7007-2022 <i>Regulation for Type Test of Lifts</i> , GB/T 7588.1-2020, GB/T 7588.2-2020, ISO 8100-1:2019, ISO 8100-2:2019, EN 81-20:2014(EN 81-20:2020), EN 81-50:2014(EN 81-50: 2020)		
Test Conclusion	Certificated.		
Tested by:	Date:2022-11-21	Approval certificate of type test organ:  TS7610022-2025  Shanghai Jiao Tong University Elevator Test Center 2022-11-21	
Verified by:	Date:2022-11-21		
Approved by:	Date:2022-11-21		

**1、 Technical parameters and configuration of sample**

Type of safety gear	Progressive	Type of elastic elements	“π” spring
Permissible mass	3200kg	Rated speed of lifts	≤2.5m/s
Tripping speed of the overspeed governor	≤3.55m/s	Applicable material of guide rail	Q235
Type of gripping (braking) elements	Groove shape	Material of gripping (braking) elements	Fixed wedge: ZG50CrMo Sliding wedge: QSn6.5-0.1
Quantity of gripping (braking) elements	(Unilateral clamp body) Fixed wedge:1 Sliding wedge:1	Dimensions of gripping (braking) friction surface	Fixed wedge: 25mm×110mm Sliding wedge: 22mm×100mm
Applicable hardness of guide surface of guide rail	110~143(HBW)	Applicable width of guide surface of guide rail	16mm
Applicable processing method of guide surface of guide rail	Drawn	Applicable lubrication of guide surface of guide rail	Dry
Anti-mechanical spark measures	N/A		
Note: The selection of guide rail shall also be determined according to the design and calculation results of the applied lift system.			

**2、 Check for technical documents of the sample**

No.	Items No.	Check items	Check results	Conclusion
1	M5.1	Conformity certificate documents and instruction	Comply with requirements	Pass
2	M5.2	Technical documents for main construction parameter	Comply with requirements	Pass
3	M5.3	Relative technical documents	Comply with requirements	Pass
4	--	Other necessary documents	N/A	N/A



### 3、 Check and test of the sample

No.	Items No.	Check and test items	Check and test results	Conclusion
1	M6.3.1	Determination of the braking force of the safety gear	See Appendix 1 for test results. No crack or obvious plastic deformation after test	Pass
2	M6.3.2	Determination of the permissible mass	3635kg	Pass
3	M6.4	Requirements for safety gear of service lifts	N/A	N/A
4	M6.5	Nameplate	Comply with requirements	Pass
5	M6.6	Explosion-proof environment	Common indoor	N/A



## Appendix

### 1. Test results

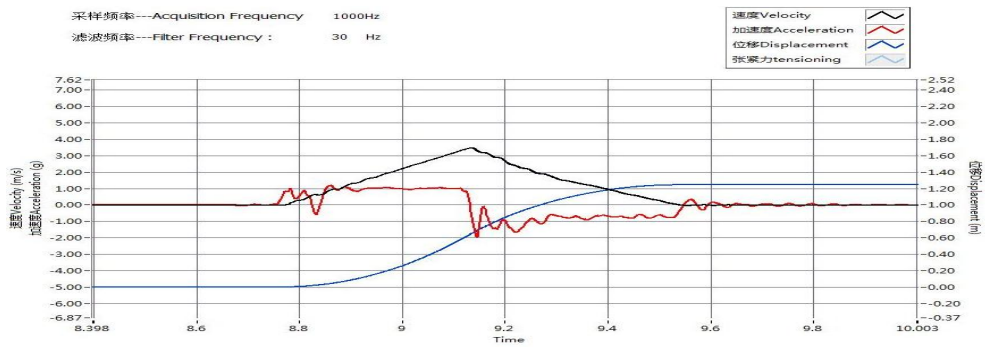
Table 1:

Check and test items		Number of tests				
		1	2	3	4	5
Total test mass (kg)		3200				
Model, surface hardness (HBW) and lubrication of test guide rail		T90/B、131HBW、Dry				
Tripping speed of the overspeed governor(m/s)		3.55				/
Height of the free fall(mm)		642				115
Deformation of elastic elements (mm)	Left	2.1	2.1	2.1	2.1	2.1
	Right	2.1	2.1	2.1	2.1	2.1
Braking distance(mm)		701	699	717	706	234
Average deceleration ( $g_n$ )		0.85	0.86	0.81	0.89	0.59
Maximum deceleration( $g_n$ )		1.95	1.91	1.37	2.71	1.49
Average braking force(N)		58075	58389	56820	59331	49913
Greatest instantaneous braking force(N)		92606	91351	74399	116464	78166
Deviation of the braking force		-0.1%	0.4%	-2.3%	2.0%	-14.2%
Determined braking force by test (N)		58154				
Calculated permissible mass (kg)		3635				
Deviation between the calculated permissible mass and those expected by the applicant		13.6%				

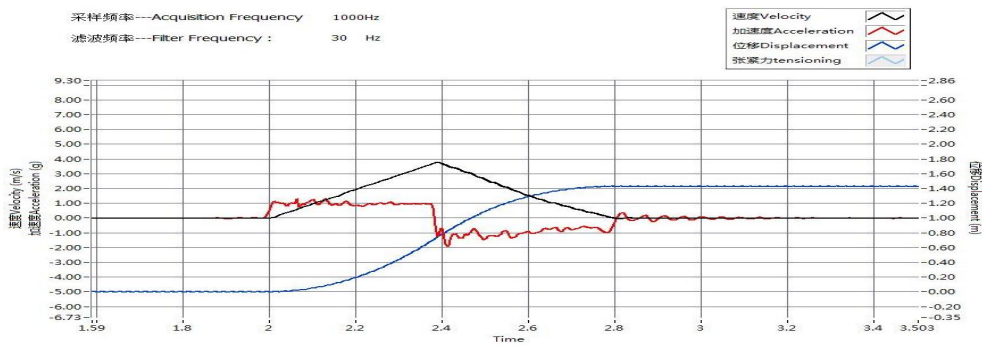


## 2. Curves of test

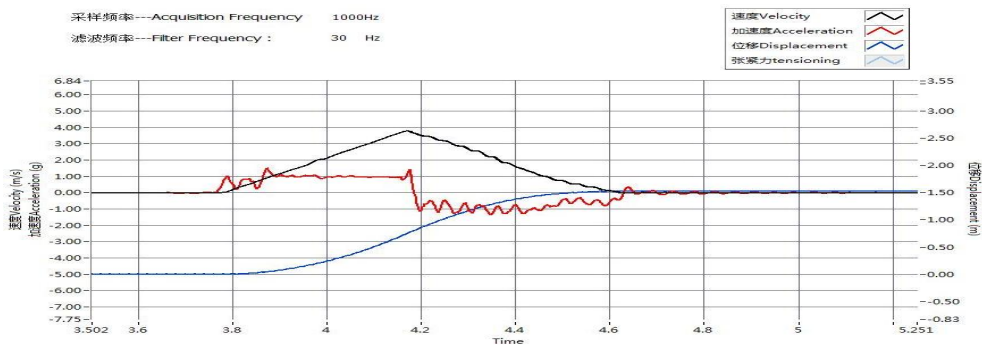
### Test curves of the 1st free fall



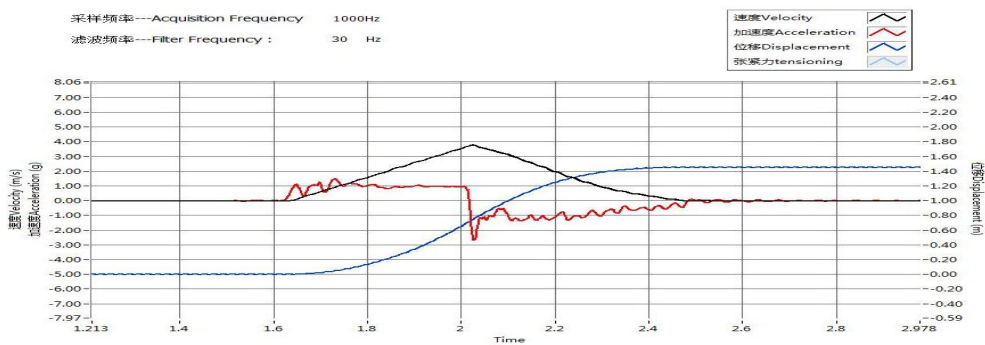
### Test curves of the 2nd free fall



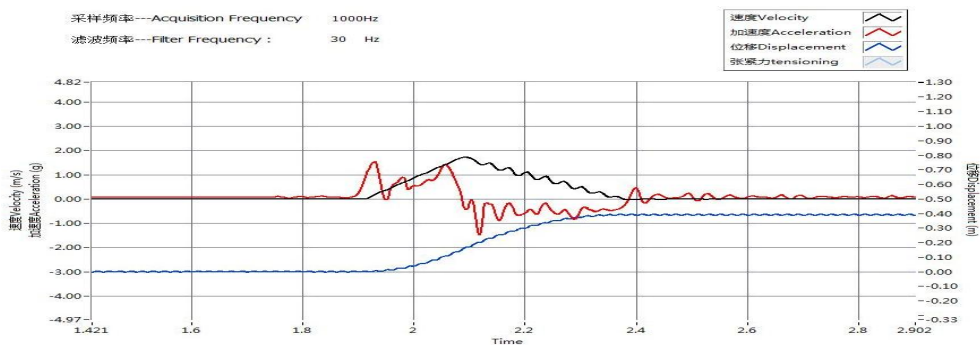
### Test curves of the 3rd free fall



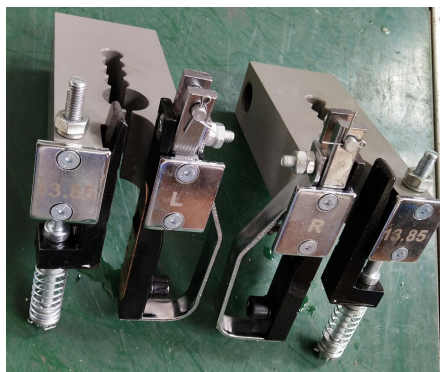
### Test curves of the 4th free fall



## Test curves of the 5th free fall



### 3. Photo of the sample



### 4. Other information

- (1) At the request of the applicant, in order to improve the test efficiency, this component test is conducted in the test site of the applicant.
- (2) This English report is a translated version of the Chinese report and is issued on the same date as the Chinese report.

### 5. Revision (s) of the type test report

None.