

HEN YL

SHE

CO. 170



KAS Quality Service (Guangzhou) Co., Ltd. Lab: Chenziwei, Xinsha Village Committee, Muzhou Town, Xinhui District, Jiangmen, Guangdong 529143, China.

oct

## Report Number: J250227002-1

CO. LTD SHEWLHEN YEL ELECTRIC

LTD SHEWIHE

ELECTRIC LOCK CO.

co. 170

# TRIC LOCK CO. 2014/A1:2018 JUHEN VILLEN 1634-1:

# ELECTRIC LOCK CO. LTD SHE Fire Resistance Test for Doorset

SHEWLHEN YL

. N. M. FIFCTRIC LOCK CO. Shenzhen YLL Electric Lock Co., Ltd. SHEWLHEN YL

**Revised Date: Total Pages:** Doc. control CINCK CO. LTD No.

LOCK CO. 170

Jul 4, 2025

ELECTRIC LOOK

46

TTRF\_EN 1634-1\_2014\_c © 2020 KAS



Report Number: J250227002-1

ic lock

## 1. SUMMARY

 $\langle \rangle$ 

SHEWLHEW

Product: Manufactured by Model:

Fire rate building hardwares GUANGDONG ENLONG SECURITY GATED CO., LTD. Magnetic Lock: YM-750N(LED), YM-750ND(LED) Electric Strike: YS-621-S(SS304), YS-622N-S(SS304) Push Bar Device YED-641(SS)/650mm, YED-641(SS)/880mm, YED-642(SS) Door Loop: DLK-402-SS, DLK-402L-SS Electromagnetic Door Holder: YD-605, YD-611-E

JHEN YLL ELECTRI The performance of the specimens was judged against the criteria for integrity and insulation, as required by EN 1634-1:2014/A1:2018, and the results obtained were as follows:

		Doorset A	Doorset B
	Sustained flaming	196 min no failure	196 min no failure
Integrity (E)	Gap gauge	196 min no failure	196 min no failure
THE	Cotton pad	Not evaluation	Not evaluation
	Door leaf	21 min	) · ` 19 min
➢ Insulation (l₂)	Door frame	110 min	86 min
he test was discontinue	d after a period of 196 mi	nutes at request of the spo	nsor.
est performed by:	Name: Singh Date: 4-Jul-2 Title: Projec	Thang Zhang 25 t Engineer	ECTRIC LOCK CO.
	KASC	ality Service	
	$\sim$		$\Omega$

## 2. SIGNAT

Sanah

ELECTRIC LOCK CO. Report authorised by: ELECTRIC

rodu

Credy Chen Name: 4-Jul-25 Date: **Technical Manager** Title: c0.170 **KAS Quality Service** ELECTR

1V

 $\sim$ 

SHEWLHEN VILLELECTRIC LOCK CO

SHEM

		ct	a la companya da seria da ser
	AL.	Lov.	
	THEM	R	(10
KAS	ENL.	Test Re	
KAS QUALITY SERVICE		Report Number: J2502270	002-1
	3. CONTENTS		S.
, · · · ·	HEN	, el C	
1. SUMMARX	ENV.	<u> </u>	2
2. SIGNATURES	St		2
		<u> </u>	3
4 TEST DETAILS	~ `		4
5. TEST OBJECTIVE	Ct .	Chill.	5
6. TEST SPECIMEN	C C C INIC O	Str.	
7. TEST EQUIPMENT AND PRO	OCEDURE		9
8. TEST RESULT	C.		11
9. PERFORMANCE CRITERIA.	ct	AL IN	21
		Shi	22
APPENDIX A SUPPORTING CON	STRUCTION	$\sim$	23
APPENDIX B TEST SPECIMEN C	CONSTRUCTION	<u></u>	24
APPENDIX C TEST PHOTOGRA	PHS	CL C	
10. TEST CONCLUSIONS	~	MUL ELECTRIC LOCK ON A CONTRECT ON A CONTRECT OF A CONTREC	46
CO.	R		\$\$
HENL	C.	· · ·	~
5		ct	
	11	LOV.	
( <sup>0</sup> . '	HE	RIC	
act -	HENL	Lec'	0-
	SI		A
ARIO (	>	AV.	Lor.
C. C.			
ct.	HALL	Le la	
	Str		
R		11	
	~O.``	11 Martin Contraction	
	rt	FMIL	
, th	LOU.	SHI	
14EM	0		
JENK ECT		MAN ELECTRIC MAN ELECTRIC MAN ELECTRIC SHEWLING MAN ELECTRIC SHEWLING MAN ELECTRIC SHEWLING MAN ELECTRIC SHEWLING MAN ELECTRIC SHEWLING SH	
Version: 29-Aug-2021	Page 3 of 46	TTRF_EN 1634-1_	_2014_c
VEISION 23-Pug 2021	, OCT		
A A	C . V		



Report Number: J250227002-1

## 4. TEST DETAILS

SHEWLHEN

**Applicant Information** Applicant Name:

Applicant Address:

Shenzhen YLI Electric Lock Co., Ltd.

Room 1605, Block A, Haisong Building, Tairan 9th Road, Futian District, Shenzhen

	Sample Information	2.
	Product:	Fire rate building hardwares
	Trade Mark:	YLI
	Model and/or type reference:	Magnetic Lock: YM-750N(LED), YM-750ND(LED)
		Electric Strike: YS-621-S(SS304), YS-622N-S(SS304)
	1V	Push Bar Device: YED-641(SS)/650mm, YED-
1		641(SS)/880mm, YED-642(SS)
		Door Loop: DLK-402-SS, DLK-402L-SS
	The second se	Electromagnetic Door Holder: YD-605, YD-611-EX
2	Manufacturer:	GUANGDONG ENLONG SECURITY GATED CO., LTD.
	Manufacturer Address:	Building 3, No. 153, Industry 4th Road, Encheng Street, Enping City, Jiangmen City, Guangdong Province, China
	Sample ID:	S250227002-01~11
	Date of receipt of test samples:	2025/2/27
	Situation of receipt samples:	Good

#### **Testing Information**

Standard: Non-standard method or requirement:

Testing Laboratory name:

Address:

Date (s) of performance of tests: Other reports to be used in

conjunction with this report:

EN 1634-1:2014/A1:2018 & EN 1363-1:2020

KAS Quality Service (Guangzhou) Co., Ltd.

Chenziwei, Xinsha Village Committee, Muzhou Town, Xinhui District, Jiangmen, Guangdong 529143, China. FCIBIC 2025/6/3

This report is for the exclusive use of KAS' Client and is provided pursuant to the agreement between KAS and its Client. KAS responsibility and liability are limited to the terms and conditions of the agreement. KAS assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned using this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the KAS name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by KAS. The observations and test results in this report are relevant only to the sample tested.

1

Version: 29-Aug-2021

foct co



Report Number: J250227002-1

### 5. TEST OBJECTIVE

SHEWIHEN

The test was conducted in accordance with EN 1634-1: 2014/A1: 2018 Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware Part 1: Fire resistance test for door and shutter assemblies and openable windows, to determine 180 minutes fire resistance performance of 1 set of single leaf steel doorset & 1 set of double leaves steel doorset, which incorporated various items of building hardware.

The test utilized the general principles for fire resistance testing given in EN 1363-1: 2020 Fire resistance tests Part 1: General Requirements.

# C. TEST SPECIMEN

Specimens were submitted to KAS directly from the sponsor. Specimens were not independent selected to test. Specimens were received at KAS on 2025/2/27.

The test specimens were built into a masonry wall support system according to manufacturer's instruction by KAS. The test constructions were shown in Appendix A, Figure A.1 & A.2. View from unexposed side, the left test doorset A and the right test doorset B opened away the heating conditions of test.

#### 6.1 Single leaf steel doorset A:

The single leaf steel doorset had overall nominal dimensions of 2100 mm high x 800 mm wide x 110 mm thick. The doorset incorporated a single door leaf of overall dimensions 2050 mm high x 713 mm wide x 52 mm thick, which comprised of 20 mm thick mineral wool as door core and sandwiched by 0.8 mm thick galvanized steel plate on both sides. The stiffeners of the door leaf were comprised of 8 nos. of 30 x 50 x 2.5 mm thick galvanized steel square tube.

The door leaf was provided with a Push Bar Device 'YLI (YED-641(SS)/650mm', installed on the push side of the doorset and featuring a lever handle on the other side.

During the fire test, the push bar was latched in combination with the Electric Strike 'YLI / YS-621-S(SS304)' which was configured for Power to Safe mode.

The Magnetic Lock YLI / YM-750N(LED)' was surface mounted on the upper position of the pull side of the doorset, whilst the armature plate of the Electromagnetic Door Holder 'YLI / YD-605' was surface mounted on the lower position of the same side.

A Door Loop YLI / DLK-402-SS' was embedded in the door frame, and all of the above mentioned hardware components were not powered during the fire test.

The test doorset was built into a specimen support system according to manufacturer's instruction by KAS. The test construction was shown in Appendix A, Figure A.1. The doorset was opening away from the heating conditions of test.

#### Table 1a Specimens description

Refer to Figure B.1, B.7~B.11, unless stated otherwise, all values are nominal, and all information in Table 1a is supplied by the client.

Door Leaf	Туре	Fire resistanc	e steel single door
0	Nominal Size	713 mm x 205	50 mm x 52 mm
.C Y		Material:	Galvanized steel plate
1P	Facing	Thickness:	0.8 mm
Door Leaf	Core	Material:	Glass fiber cotton (100kg/m <sup>2</sup> )
	L	Material:	Galvanized steel plate
	Stiffeners	Size:	30 x 50 mm
		Thickness:	2.5 mm
Door Frame	Material:	1.2 mm Galv	anized steel

(0)



# IRIC LOUX **Test Report**

		$\sim$		
	L.		loct	
KAS	SHEWLHEN		Test F	Report
KAS QUALITY SERVICE	~		Report Number: J2502	27002-1
	Rebate:	20 mm	1V.	00
	Nominal Size:	2100 mm x 80	0 mm x 110 mm *	5
ct co.'		Model:	SS002	
Ct	1.12	Material:	SS304	
	Hinge	Number:	4 pcs *	
		Size:	4" x 4" x 3 mm	
< <u>&lt;</u>		Brand:	YER	
	0	Model:	YM-750N(LED)	
	Magnetic Lock	Size:	280 x 83.6 x 47.1 mm	
EN YLL ELECTRIC L	C	Material:	E66 Silicon Steel Sheet & Aluminum	
		Brand:	YLI	
el to	Push Bar	Model:	YED-641(SS)/650mm	
	Device	Material:	SS304	
Th.		Size;	Touch bar length: 450 mm	
SHEWLAEN YUL		Brand:	YLI	
AL.		Model:	YS-621-S(SS304)	
CHILI	Electric Strike	Material:	SS304 0	1
		Size:	234 x 46.5 x 29.8 mm	1. All
	Th.	Brand:	YLI	Str
	KM I	Model:	YD-605	< <u>\</u>
TL.	Electromagnetic Door Holder	Material:	Steel	
CHILL		Size:	Part 1: 65 x 65 x 41 mm	)``
		0126.	Part 2: 118 x 93 x 110 mm	
		Brand:	YLI	
	Door Loop	Model:	DLK-402-SS	
P		Material:	SS304	
Ct I	- HE PS.	Size:	300 x 24 x 15.5 mm	

#### 6.2 Double leaves steel doorset B:

jet co The double leaves steel doorset had overall nominal dimensions of 2100 mm high x 2000 mm wide x 110 mm thick. The doorset was comprised of double door leaf which active and inactive leaf sized of 2050 mm (W) x 955 mm (H) x 52 mm (T), which comprised of 20 mm thick mineral wool as door core and sandwiched by 0.8 mm thick galvanized steel plate on both sides. The stiffeners of each door leaf were comprised of 8 nos. of 30 x 50 x 2.5 mm thick galvanized steel square tube.

The active door leaf was provided with a Push Bar Device 'YLI / YED-641(SS)/880mm', installed on the push side of the doorset and featuring a lever handle on the other side.

The inactive door leaf was provided with a Push Bar Device 'YLI / YED-642(SS)' installed on the push side of the doorset.

During the fire test, the push bar of active door leaf was latched in combination with the Electric Strike 'YLI YS-622N-S(SS304)' which was configured for Power to Safe mode, whilst the push bar of inactive door leaf was bolted.

The Magnetic Lock 'YLI / YM-750ND(LED)' was surface mounted on the upper position of the pull side of the doorset, whilst the armature plate of the Electromagnetic Door Holder 'YLI / YD-611-EX' was surface



# IRIC LOUX **Test Report**

Report Number: J250227002-1

SHEWLHEN YL mounted on the lower position of the same side of the active door leaf.

A Door Loop 'YLI / DLK-402L-SS' was embedded in the door frame near the inactive door leaf of the doorset, and all of the above mentioned hardware components were not powered during the fire test.

 $\langle \rangle$ 

The test doorset was built into a specimen support system according to manufacturer's instruction by KAS. The test construction was shown in Appendix A, Figure A.1. The doorset was opening away from the heating conditions of test.

#### Table 1b Specimens description

A VLI ELECTRIC Refer to Figure B.12, B.13, B.2~B.6, unless stated otherwise, all values are nominal, and all information in Table 1b is supplied by the client.

in table to is supplied by				
Door Leaf	Type ~	Fire resistance	e steel double door	
	Nominal Size		5 mm x-52 mm	<
	C	Material:	Galvanized steel plate	1
K	Facing	Thickness:	0.8 mm	Tr
Door Leaf	Core	Material:	Glass fiber cotton (100kg/m <sup>2</sup> )	
		Material:	Galvanized steel plate	
The second se	Stiffeners	Size:	30 x 50 mm	
		Thickness:	2.5 mm	
11th	Material:	1.2 mm Galva	inized steel	
- Her	Rebate:	20 mm	c0°'	
5	Nominal Size:		00 mm x 110 mm *	
	AV.	Model:	SS002	
	43	Material:	\$\$304	
	Hinge	Number:	4 pcs each leaf	
		Size:	4" x 4" x 3 mm	. X
5	Magnetic Lock	Brand;	YLE	
		Model:	YM-750ND(LED)	
		Size:	560 x 83.6 x 47.1 mm	
Door Frame	I THE A	Material:	E66 Silicon Steel Sheet & Aluminum	
	Si	Brand:	YLI	
Door Frame		Model:	YED-641(SS)/880mm	
	Push Bar	Material:	SS304	C.
and the second second	Device 1	Size:	Touch bar length: 600 mm	R
ct-		Location:	Push side of active door leaf	
		Brand: S	YLI	
KCTRIC		Model	YED-642(SS)	
C.T.K.	Push Bar Device 2	Material:	SS304	
	Device 2	Size:	Touch bar length: 600 mm	
	ct	Location:	Push side of inactive door leaf	
TV.	0	Brand:	YLI Str	
	G	Model:	YS-622N-S(SS304)	
	Electric Strike	Material:	SS304	
		Size:	153.1 x 49 x 43 mm	



# TRICLOUT Test Report

Report Number: J250227002-1

Report Number: J250         Brand:       YLI         Model:       YD-611-EX         Material:       Steel         Door Holder       Brand:         Brand:       YLI         Model:       YD-611-EX         Material:       Steel         Door Loop       Brand:         Material:       SS304		4		Loct
Electromagnetic       Model:       YD-611-EX         Door Holder       Material:       Steel         Part 1: 75 x 75 x 41 mm       Part 2: 75 x 75 x 39 mm         Brand:       YLI         Model:       DLK-402L-SS         Material:       SS304		SHEWLHEN		Test R Report Number: J2502
Electromagnetic Door Holder       Material:       Steel         Size:       Part 1: 75 x 75 x 41 mm         Part 2: 75 x 75 x 39 mm         Brand:       YLI         Model:       DLK-402L-SS         Material:       SS304		R	Brand:	(YLI
Door Holder     Material:     Steel       Door Holder     Part 1: 75 x 75 x 41 mm       Size:     Part 2: 75 x 75 x 39 mm       Brand:     YLI       Model:     DLK-402L-SS       Material:     SS304		Y	Model:	YD-611-EX
Size:         Part 1: 75 x 75 x 41 mm           Part 2: 75 x 75 x 39 mm         Part 2: 75 x 75 x 39 mm           Brand:         YLI           Model:         DLK-402L-SS           Material:         SS304	<i>CO</i> .		Material:	Steel
Door Loop Model: DLK-402L-SS Material: SS304	Loct	Door Holder	Size:	
Door Loop Material: SS304	C	~	Brand	YLI
Material: SS304			Model	DLK-402L-SS
Circl 519 x 24 x 15 5 mm		Door Loop	Material:	
Size: 510 x 24 x 15.5 min		ct	Size:	518 x 24 x 15.5 mm

# WHEN YUI ELEC Specimen Supporting Construction

		Brand		
		Model.	DLK-402L-SS	
	Door Loop	Material:	SS304	192
	act	Size:	518 x 24 x 15.5 mm	KC I
men Supporting Constr	ruction	Sector States	Sh	
1. Masonry Wall	0			
Density	: 198	30 kg/m <sup>3</sup>		4
Thickness	: 200	) mm $C^{\circ}$ .		
2. Mortar		ct	EML	
Material	: Cer	ment: Sand	Shi	
Mix Ratio	: 1:4	C		
for some state of the second				

\* Verified by the laboratory before the test;

both the temperature and relative humidity of laboratory were measured and recorded as being within a range of from 28.0 °C to 30.0°C and 60% to 70% respectively. stender WI HEGRIC LOCK CO. ITO SHEWHEN WILL HEGRIC LOCK CO. ITO



Report Number: J250227002-1

## 7. TEST EQUIPMENT AND PROCEDURE

The test was conducted in accordance with the procedure specified in EN 1634-1: 2014/A1: 2018. The ambient temperature of the area was measured and recorded at comment of test. The test data were shown in Table 4.

#### 7.1 Furnace Temperature Control

The furnace opening size is  $3.4 \times 3.4 \text{ m}$ . 9 mineral insulated thermocouples, which were distributed uniformly in the furnace and were kept at  $100 \pm 50 \text{ mm}$  away from the exposed surface of test specimen, were provided to monitor the mean temperature of the furnace.

The mean temperature of the furnace was controlled as close as the standard temperature/time curve specified in Clause 5.1 of EN 1363-1:2020.

The locations and reference numbers of the furnace thermocouples were shown in Figure 1.

SHEWIHEN

#### 7.2 Furnace Pressure Control

Two pressure sensors were provided to monitor and control the furnace pressure after the first five minutes of testing the furnace atmospheric pressure so that it complied with the requirements of Clause 5.2 of EN 1363-1:2020. The pressure condition was assumed a linear pressure gradient of 8.5 Pa per 1 m and a neutral pressure axis at a height of approximately 0.5 m above the notional floor. The pressure at the top of test specimen was controlled within 20 Pa.

The locations and reference numbers of the pressure sensor were shown in Figure 4.

#### 7.3 Unexposed Surface Temperature Monitoring

The unexposed face temperature of the specimen was monitored by thermocouples as follows:

Doorset A:

	Boorborri	
	Thermocouples 1 to 5:	At five positions on the unexposed face of the door leaf, one approximately at the centre and one at the approximate centre of each quarter section of
		specimen
	Thermocouples 6 to 9:	At four positions on the unexposed face of the door leaf, two approximately at 100 mm from the door leaf top corner and two at mid height.
	Thermocouples 10 to 13:	At four positions on the unexposed face of the door frame, two positioned at approximated 50 mm from each vertical edge of top frame, and two at mid-
		height of vertical frames.
	Doorset B:	
	Thermocouples 14 to 18:	At five positions on the unexposed face of the door leaf, one approximately at
	ct	the centre and one at the approximate centre of each quarter section of
	, 0 <sup>1</sup> ,	specimen
$\langle$	Thermocouples 19 to 25:	At seven positions on the unexposed face of the door leaf, four approximately
1	The second s	at 100 mm from the door leaf top corner and three at mid height.

Thermocouples 26 to 30: At five positions on the unexposed face of the door frame, three positioned at approximated 50 mm from each vertical edge of top frame, and two at mid-height of vertical frames.

The locations and reference numbers of various unexposed surface thermocouples were shown in Figure 4.

A roving thermocouple was provided to measure temperature on the unexposed surface of the specimen at any position that might appear to be hotter than the temperatures indicated by the fixed thermocouples.

#### 7.4 Integrity Monitoring

Cotton pads and gap gauges were available to evaluate the impermeability of specimen to hot gases. The occurrence of sustained flaming more than 10 s on the unexposed face was also checked to determine compliance with the integrity criterion.

#### 7.5 Deflection of specimen

The horizontal deflection at recommended positions of the specimen was measured throughout the test by means of a straight steel ruler paralleled to the unexposed face via a taut fine steel wire. Recommended





CTRIC LOUX Test Report Report Number: J250227002-1 ELECTRIC LOCK

# SHEWHEW VILLE

8.1 Pre-test examination and preparation

10

8.1.1 Gap measurements WHEN YLL ELECTRIC



THE						A A											
CO. LTD SHEWIHE				10	9		LUCE HEL	RIC:0030	) 29	28 2	7	0·``	25				SHEWLH
	Figu	re 2 Ir	nitial C	leara	nce N	leasu	remen	it Posi			from	unexp	osed	side)			HENL
				14				es at			2						51.
.0.	1	2	3	4	5	6	7	8	9	10	11	12	13	14		$\sqrt{2}$	
	2.5	2.6	2.8	3.8	3.5	3.0	3.5	0.8	1.0	1.1	5.7	3.6	3.2	3.1			
		16	17	18	19	20	21	22	23	24	25	26	27	28	LO.		
	3.0	3.2	3.2	2.3	2.6	2.4	2.6	2.3	2.0	2.1	2.5	1.0	3.0	3.4	-		
	29	30	31	32	33	34	35	36	37	38			1	000			
	2.6	3.5	2.0	2.4	2.3	2.5	3.3	2.3 36 4.0	4.0	5.5			0		1		
All dimension	ns are	e in mi	n.			Mr.							5				foct cc
Ct-					2							5					22
				_	5							$\sum$					at C
				$\sim$	2					1							OCT -
CIT				Ň						4						C .	$\sim$
			(0)						1							2	
		C	F						C/M						- ZĜ		
		,0	)`					C C	$\sim$					<			
	. C	, ×					-	م آ						. <	$\sim$		
	18							$\sim$						TV.			
< <u> </u>	ر ار					2							K P				
						C	0					16.	X				
					6	J.						1 h					
2) Av					V						C	2					
1 KIN				0	J					/	$\langle \rangle$						
NZ.																	
CHIL!			X						C	<i>Ò</i> .,							
ELECTRIC LOCK	2021		$\sim$				Page 1	.1 of 46	A	,			-	TTRF_E	N 1634-1	_2014_	c
		V						2,	<i>b</i> ,								
1 1 2	Ŕ							c									



# TRIC LOUX Test Report r: J250227002-1

Report Number: J250227002-1

#### 8.2 Observations

Observations made during the test are given in Table 3 and unless stated were the unexposed face. Table 2 Observations

SHEWLHEN VILL

	C	Table 3 Observations	
	ime	Observations	
	n: ss		-
		The test commences. Smoke released from the top of the doorsets.	,
			-
9		The doorsets began to deform away from the furnace.	- 21
	4:21	Slight smoke released from each edge of doorsets; The intumescent seal on the meeting edge of the doorset B was swoller by heat.	the street
17	7:14	The meeting edge of doorset B began to turn black.	
20	0:00	The maximum temperature rise more than 180 °C measured by thermocouple T21 applied on the unexposed side of inactive door lea of doorset B; Insulation failure of doorset B had occurred.	
	TV.	The mean temperature rise more than 140 °C measured by	
22	2:00	thermocouple T1 to T5 applied on the unexposed side of door leaf o	T
		doorset A; Insulation failure of doorset A had occurred.	
25		Smoke release increased.	-
5		Each edge of doorsets began to turn black.	- Dr.
		The area near the skeletons of each doorset began to turn black.	- CHIL
		The door leaves of doorsets began to turn black.	
<i>cO</i> .	0.05	No integrity failure had occurred of doorset A&B. The test was terminated after a period of 196 minutes at request of the sponsor.	
ELECTRIC LOCK CO.		ot co. ITD SHEMILIAN AL HERE CO. ITD SHEMILIAN ALL HERE AND SHEMILIA	ECTRIC LOCK
SHEWL Version: 29-Aug-20	021	Page 12 of 46 TTRF_EN 16	34-1_2014_c
	L.		
	$\sim \sim$	C .	



# TRICLOUT **Test Report** Report Number: J250227002-1

#### 8.3 Deflection

The horizontal deflection at recommended positions of the specimen was measured during the test. THEN YIL FLECTRIC LOCK Recommended positions for measuring deflection were shown in Figure 3. And the test data was shown

SHEWLHEN VILLE



Figure 3 Positions for measuring horizontal deflection (View from unexposed side)

itic	D1		borizo	ontal de	D7 D8	n (View	from u	nexposed side)
Γ	Time			1		ns (mm	-	SH
T	Minutes	D1	D2	D3	D4	D5	D6	
1	0	0	0	0	0	0	0	
가	20	4	4	10	10	2	9	<i>с0</i> .
F	40	1	9	6	11	-1	10	Ct .
ŀ	60	1	8	5	11	-3	13	
F	80	0	9	7	11	1	17	C
F	100	-1	9	10	15	1	23	KP.
F	120	0	9	10	26	2	25	
L		3.					$\sim$	

<i>c0</i> .`			Minu	tes	D1	D2	D3	3 D4	U.	05	D6			$\langle \rangle$	
6		A A	0		0	0	0	0	14.	0	0			N°	
		-HK	20		4	4	10	10		2	9	<u> </u>	9	)``	
· · · · · · · · · · · · · · · · · · ·			40		1	9	6	Y 11		-1	10		C/		
			60		1	8	5	11		-3	13	$\sim$	5		
	.0.		80		0	9	7	11		1	17	, C			
- K			100	)	-1	9	10	15		1	23	4			
ELECTRIC LOCK			120	)	0	9	10	26		2	25				0
				0	9									1	ct
R	Time			$\langle \vee \rangle$		Defle	ction	at posit							00
G	Minutes	D7	D8	D9	D	10 [	D11	D12	D13	D14	1 D15	D16	D17	C.	$\sim$
	0	0	0	0	0		0	0	0	0	0	0	0	R	
$\sim$	20	0	1	9	3	1	32	11	10	6	7	-1	11	S	
	40	-2	-5	22	3	5	42	10	8	14	11	-3	16	ę.	
	60	-3	-7	25	4	1	46	14	12	18	18	-1	19		
	80	-4	-5	26	4	7	56	14	19	21		32	27		
$\sim$	100	-1	-5	29	8	ty.	62	26	21	23	1 in	-5	32		
	120	-1	-5	29	8	4	65	27	22	26	23	-8	30		

Positive deflections indicate movement towards to the heat condition. VI ELECTRIC

 $\sim$ 



c0.110

# TRIC LOUK **Test Report** Report Number: J250227002-1

### 8.4 Temperature Recorded

#### 8.4.1 Furnace temperature

The mean furnace temperature recorded was plotted against time in Graph 1 with the specified curve for comparison.

SHEWLHEN YUL I



## Graph 1 Furnace Mean Temperature / Time Curve

The mean furnace temperature and standard temperature was recorded in Table 4 for comparison. electrock co. Table 4 Furnace mean temperature and standard temperature (Unit: °C)

able 4 r u	mace mean to.		T	Ampiont	
Time	Mean	Standard	Diff%	Ambient Temperature	
Min	Temperature	and the second design of the		28.0	
0	28.8	20.0	1	20.0	
15	728.0	738.6	5.3	28.5	- Ct
30	828.6	841.8	0.5	29.0	
45	909.4	902.3	0.1	29.4	. C
60	949.1	945.3	0.0	29.8	ELECTRIC LOCK CO
75	975.1	978.7	-0.1	30.4	L C
A-)	998.5	1006.05	-0.2	30.6	
90	and the second se	1029,1	-0.2	30.5	
105	1031.9	1049.0	-1.0	30.8	
120	1051.2	and the second se	-1.1	31.1	1
135	1062.7	0.1066.7		31.4	1
150	1069.6	1082.4	-1.0	Concerning on the second s	-
165	1077.7	1096.7	-1.0	31.0	
180	1102.3	1109.7	-0.9	5 31.1	
196	1133.2	1122.5	-0.8	31.5	
	KA				
$\sim$	2		· 0 · '		
		Page 14 of	46		TTRF_EN 1634-1_2014_c

 $\sim$ 

C.

SHEWIHE



110

FCIRIC LOUT Report Number: J250227002-1

# SHEWLHEW YLL F 8.4.2 Unexposed face temperatures

The locations and reference numbers of various unexposed surface thermocouples were shown in Figure 4.



CO. 11D SHEWHE to determine Doorset A Door Leaf mean temperature rise. T26 to T30 : to determine Doorset B Door Leaf mean temperature rise. T26 to T30 : to determine Doorset B Door Frame maximum temperature rise. Figure 4 Locations and reference numbers of thermocouple on unexposed surface T1 to T5 i unexi i unexi strutter vit the strutter vit

Page 15 of 46 v

 $\sim$ 



JHEN

# RICLOUT **Test Report**

ELECTRIC

SHEWLHEW YLL E Report Number: J250227002-1

The mean and maximum temperatures raise of the unexposed face of Doorset A were shown in Graph 2a.



Graph 2a The mean and maximum temperatures raises/time curve

The door leaf of Doorset A mean temperature rise for insulation (140°C rise) was exceeded at 22 min. The door leaf of Doorset A maximum temperature rise for insulation (180°C rise) was exceeded at 24 min. The door frame of Doorset A maximum temperature rise for insulation (360°C rise) was exceeded at 111 min. The individual temperatures recorded on the unexposed face of the Doorset A were shown in Table 5a. Table 5a Individual temperatures recorded on the unexposed face of the Doorset A

·0·'	Ia	able 5a Ind	Ividuar	tempera	itures re		and the second se	and the second se					$\mathbf{K}$
co.`	Area		SV.			Positior	n at door	·leaf					
	Time	T15	T2	Т3	Т4	Т5	<b>T6</b>	Т7	Т8	Т9	Mean	Max	
	Min 0	21.7	27.9	22.5	26.8	27.4	21.2	24.5	23.5	28.1	25.3	28.1	
	5.	27.8	29.7	24.0	32.4	28.6	38.4	29.3	32.9	30.6	28.5	38.4	
	10	54.5	47.4	36.7	57.9	43.2	68.9	51.1	61.7	41.3	47.9	68.9	
ELECTRIC LOCK	15	98.4	91.8	89.3	103.0	86.9	98.2	84.7	93.1	70.2	93.9	103.0	, oct co
C,	22	187.9	168.8	151.8	189.5	158.2	155.4	138.4	162.4	135.6	171.2	189.5	ct
RI	24	211.9	179.5	179.5	209.8	172.5	171.7	151.2		153.9	190.6	211.9	- 10°
	30	279.5	222.3	217.5	273.2	210.5	216.1	188,4	240.5	206.1	240.6	279.5	
	35	318.1	246.6	238.1	350.1	238.4	245.3	V	272.0	232.5	278.3	350.1	
	40	355.2	282.9	274.8	408.7	272.6	284.5	243.9	299.4	262.0	318.8	408.7	
	47	420.7	314.2	311.3	426.9	302.4	318.0	276.5	327.7	297.4	355.1	420.9	1
SHEWLIFEN	ELEC	2021			set	J. '			3	297.4	J.		
CHEWZHEN			C LEC	R				.°.	(1)			EN 1634-1	2014 c
Version	n: 29-Aug-3	2021				Page 16	5 of 46 4				TIKF_	EN 1034-1	L_2014_L



JHE

# RICLOUT **Test Report**

ELECTRIC

0)

Report Number: J250227002-1

SHEWLHEW YLL F The mean and maximum temperatures raise of the unexposed face of Doorset B were shown in Graph 2b.



Graph 2b The mean and maximum temperatures raises/time curve

he door leaf of Doorset B mean temperature rise for insulation (140°C rise) was exceeded at 21 min. The door leaf of Doorset B maximum temperature rise for insulation (180°C rise) was exceeded at 20 min. The door frame of Doorset B maximum temperature rise for insulation (360°C rise) was exceeded at 87 min. The individual temperatures recorded on the unexposed face of the Doorset B were shown in Table 5b. Table 5b Individual temperatures recorded on the unexposed face of the Doorset B

0.			TGIOTO O	D IIIUIVIC						~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					)
3	Area			í.	V.		Po	sition at	door lea	af				V	
	Time	T14	T15	T16	T17	T18	T19	T20 <	T21	T22	T23	T24	T25	Mean	Max
	Min		0										Ct-		
	0	26.6	28,4	28.6	26.4	29.2	28.0	26.7	28.5	28.2	28.6	29.1	28.3	27.8	29.2
	5	27.6	30.4	36.9	28.0	29.9	46.1	37.5	45.3	37.8	33.2	40.9	29.3	30.6	46.1
	10	46.2	30.0	67.5	48.9	38.6	81.6	71.0	89.2	62.3	48.7	75.1	36.9	46.2	89.2
	15	107.2	61.8	132.7	114.9	69.6	129.0	114.6	151.1	97.3	76,3	126.4	52.1	97.2	151.1
	20	167.8	124.3	207.7	169.7	128.5	167.5	179.8	210.3	141.2	119.8	196.8	80.4	159.6	210.3
ć	21	177.8	137.0	226.8	178.6	141.5	173.9	193.9	220.0	149.7	129.5	211.2	87.9	172.3	226.8
	25	217.3	182.9	282.9	216.0	188.0	202.8	248.8	255.8	180.8	167.6	263.4	124.0	217.4	282.9
	30	261.2	228.4	339.8	249.9	233.8	240.9	321.4	301.4	214.4	217.5	317.8	176.9	262.6	339.8
	35	284.5	252.0	376.1	268.6	255.8	260.7	351.3	325.4	242.3	246.5	339.4	220.7	287.4	376.1
	40	307.9	267.8	404.9	297.4	275.5	285.3	379.3	341.6	255.4	273.5	357.3	251.4	310.7	404.9
	47	333.6	284.5	430.5	326.7	296.7	312.7	407.1	359.2	269.7	303.2	380.9	281.2	334.4	430.5
	LHEN Ve	12		111		, or	ţ,				SHE	The			
	THEL				FCIP	0		nge 18 of 4	C	J. '					
5	Ve	rsion: 29-Au	g-2021	12			Ра	nge 18 of 4	ect.			т	TRF_EN 16	534-1_2014	<b>1_с</b>
			<	<u></u>				С.	Ť						



			$\sim$				0	
			N				<i>, 6</i> C	
			LHEN YI					×
1/00		A A				C/K		Test Report
KAS		CHK.						
KAS QUALITY SERV	/ICE	2.					t Numb	er: J250227002-1
	Area	)	Р	osition at	door frame	9		a con
	Time	T26	T27	T28	T29	Т30	Max	er: J250227002-1
	0	27.3	26.0	28.2	23.6	28.4	28.4	A Charles and the second se
Ct	10	49.5	90.1	83.3	107.5	29.5	107.5	
	20	90.2	97.1	438.5	153.4	79.5	153.4	
	30	126.6	117.3	191.2	148.6	114.2	191.2	
R	40	180.2	163.5	241.3	180.6	154.1	241.3	
G	50	230.7	191.9	281.8	216.9	188.2	281.8	
EN YLL ELECTRIC LOCK	60	268.0	219.6	318.6	251.3	220.4	318.6	
, V	70	302.1	250.1	354.0	284.4	248.8	354.0	
	80	326.8	276.4	376.5	313.5	274.3	376.5	
	87	341.1	294.0	388.6	331.6	289.5	388.6	
	100	∪ 362.3	316.2	405.3	355.	313.4	405.3	
	110	377.5	331.7	416.8	368.7		416.8	1 Av
	<120	389.6	344.9	423.3	382.5	1	423.3	
	132	403.6	358.0	436.6	389.8	1	436.6	1 THI
Note:				ct				SHEWHEN YELLECT
4 The the surger could	ple T30 w	as malfun	ction afte	r 102 min	utes.			Shi
	on the un	exposed	temperafi	ire of doo	r leaf was	only mon	itored fo	r 47 minutes, the
<ol> <li>For safety reason unexposed tem</li> </ol>	on, the un	exposed	mo	ECTRICODIT	ored for 1	32 minute	es.	
unexposed tem	perature c	or door tra	ine was t			oz minate		
SHELL				SE EN		2	2.	
5				18 * 05				ie.
	SHEWIH	AL.				32 minute		SHEW SHEW
\.``	<	4			,0			Ø
)	14				18			
	Eller				SC.			
	SHI			0				C
~								Ct.
								N.

- SHUTTER WILLELOW CO. ID SHUTTER WILLELOW CO. 2021 N. V. I. F. F. C. LOCK CO., LTD SHEWING HOLE CO. LTD SHEWING





RICLOUT **Test Report** Report Number: J250227002-1

# SHEWLHEN YLL 9. PERFORMANCE GRITERIA

The performance of the specimen was assessed against the criteria for integrity and insulation in accordance with Clause 11 of EN 1363-1:2020 and Clause 11 of EN 1634-1: 2014+A1: 2018. The performance criteria for failure were given as follow:

#### Integrity (E):

These are the times in completed minutes for which the test specimen continues to maintain its separating function during the test without:

- ( ) a) causing the ignition of a cotton pad when applied; or
  - b) permitting the penetration of a gap gauge as follows:

i) whether the 6 mm gap gauge can be passed though the test specimen such that the gauge projects into the furnace, and can be moved a distance of 150 mm along the gap; or

ii) whether the 25 mm gap gauge can be passed though the test specimen such that the gauge projects into the furnace.

c) resulting in sustained flaming for a period of time greater than 10 seconds.

#### Insulation (I):

This is the time in completed minutes for which the test specimen continues to maintain its separating function during the test without developing temperatures on its unexposed surface which:

a) increase the average temperature above the initial average temperature by more than 140°C; or

b1) increase at any location (including the roving thermocouple) above the initial average temperature by more than 180 °C; [Supplementary procedure - Classification I+]

b2) increase at perimeter frame member of the doorset or openable window above the initial average temperature by more than 360 °C; and any other location (including the roving thermocouple) above the initial average temperature by more than 180 °C; [Normal procedure - Classification I2]

SHEWLIFEN VILLE ELECTRIC LOCK The performance criteria 'insulation' shall automatically be assumed not to be satisfied when the 'integrity' criterion ceases to be satisfied. SHEWLHEW VI ELECTRIC LOCK CO.

T



TRIC LOCK **Test Report** Report Number: J250227002-1

SHEWLHEN VILL E ARPENDIX C TEST PHOTOGRAPHS





 $\sim$ 

CO. 17



# FCIRIC LOCK **Test Report** Report Number: J250227002-1





# TRICLOCK Report Number: J250227002-1





# FCIRIC LOUX **Test Report** Report Number: J250227002-1





# FCIRIC LOCK **Test Report** Report Number: J250227002-1

~





# FCIRIC LOCK **Test Report** Report Number: J250227002-1





# FCIRIC LOUK **Test Report** Report Number: J250227002-1





# FCIRIC LOCK **Test Report** Report Number: J250227002-1



1

C.



# **REVISION HISTORY**

			11-1-	ECTRIC LOCK Test Report				
KAS	KAS QUALITY SERVICE	SHEWH	EN VILLET	Report Nur	Test Report			
		RE	VISION HIST	RY	Loct			
	Revision No.	Date	Changes	Author	Reviewer			
	Original	7/4/2025	First issue	Singh Zhang	Credy Chen			
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		Laho CK					
	2		All the state	t -				
L	<u>C</u>							
	*******	*****	) ***********	****	****			
T		, 007	The End of Report	SHE				
		, C Y						
	A.	6	0.1		1 th			
	E.		· · Q.		HE MAN			
					. CHIL			
	EWEHEW VILLELECT		ETRIC LOCK		SHEWLIEN VILLE			
	4.3		C		0			
	THE		AR'					
A A				· · Q2				
2.				A				
		1V		, OC.	S			
· ·		4.2		C ~				
		(Kr	42					
	CHEI				(0)			
	-)				ct			
			1/		0.			
	t co. LTD SHEN				C Ť			
			White	A P				
6								
		5			C			
R					, O			
					C .			
		$\mathcal{C}$	The second		19			
	Ct		CHEI					
			2					
	R				1V			
	LC I							
			C	TH				
11		6	J.	CHEIN				
A	n: 29-Aug-2021			5	TTRF_EN 1634-1_2014_c			
HE		R						
NV.		2C	0					
Version	n: 29-Aug-2021	Y	Page 46 of 46	5	TTRF_EN 1634-1 2014 c			
Version			ct					
	1 d		$\sim$					