台灣防火科技有限公司

Taiwan Fire Protection Technology CO., Ltd.

Building Firewall Fire Test Report

LVKE PREFABRICATED (SUZHOU) CO., LTD. commissioned to test the LVKE fast- standing wall, the test bodies TW-161123-01 and TW-161123-02 in the 1-hour heating test, on the non-aeration surface, we did not observe the 10-second duration of the flame, and it did not produce a cotton pad ignition and clearance gauge penetration of the opening; The highest back temperature recorded in the test process, the test body TW-161123-01 is 89. 6 ℃, TW-161123 102 is 92 4℃, the maximum average temperature, test body TW-161123-01 is 83.4 ℃, the test body TW-161123-02 is 87 4℃, its fire resistance is marked as the smoldering 60 minute and the heat resistance 60 minute, and it conforms to the grade of 1-hour fire prevention time.

Entrusted by	： LVKE PREFABRICATED (SUZHOU) CO., LTD.
Product name	： LVKE Fast-standing Wall
Report No.	： TP-WT-170116-01
Report-issued Date	： January 16, 2017
Test date	：November 29, 2016
Trustee Unit	：Taiwan Fire Protection Technology Co., Ltd.
Laboratory Address	：No. 28 Gongdong 2nd Road, Quanxing Industrial Zone, Shengang Township, Changhua County
Website	：www.tfpt.com/tw
Tel	： 04-7977866
Fax	： 04-7978261
Report signed by	： _Chen,Chuen-Ching

January 16, 2017

Remarks:
1.This report is only responsible for the test piece. Without the written consent of the Company, no duplicated copy of the report is allowed.
2.This report is for reference only, and it shall not be used for legal proceedings.

II. Test Results

Proxy number		RT-WT-161118-01	
Entrusted Unit	Name	LVKE PREFABRICATED (SUZHOU) CO., LTD.	
	Address	No.08, JINPU ROAD, SUZHOU, JIANGSU, CHINA	
Test Unit	Name	Taiwan Fire Protection Technology Co., Ltd.	
	Address	No. 28, Gongdong 2nd Road, Quanxing Industrial Zone, Shengang Township, Changhua County	
Product Name		LVKE fast- standing wall	
Structure Name		Non-load-bearing wall	
Specimen Construct		Refer to Table 1, Photo 1, Photo 2, Photo 3, Photo 4, and Photo 5.	
Test Methods		CNS12514-1 Fire Test Method for Building Structural Components - Part 1: General Requirements. CNS12514-8 Fire Test Methods for Building Construction Components - Part 8: Particular Requirements for Non-Loadbearing Vertical Zoning Members. (Published on November 3, 103)	
Performance Test		1-hour fire efficiency test	
Specimen No.		TW-161123-01	TW-161123-02
Test Date		November 23, 2016	November 23, 2016
Test Setting	Pre-set Heating Time (min)	60	60
	Actual Heating Time(min)	60	60
	Test Environment Humidity (%)	69.0	69.2
	LPG Fuel Consumption (M)	41.7	39.5
	Back Temperature Measuring Position	Refer to Photo 8	Refer to Photo 9
	Deformation Measuring Position	Refer to Photo 10	Refer to Photo 11
	Furnace Temperature Measuring Position	Refer to Photo 12	Refer to Photo 12
	Furnace Pressure Measuring Position	Refer to Photo 13	Refer to Photo 13
	Maximum Damage Temperature (℃)	203 ·3 (Initial average 33 ℃ + 180℃)	204·0 (Initial average 24·0℃+180℃)
	Maximum Average Damage temperature (℃)	163 ·3 (Initial average 233℃ + 140℃)	164·0 (Initial average 24·0℃+ 140℃)
Test Result	Heating Test History	Refer to Table 2	Refer to Table 3
	Back-side Temperature	Refer to Photo 14, Table 4	Refer to Photo 15, Table 5
	Deformation volume	Refer to Table 6	Refer to Table7
	Furnace Heating Temperature	Refer to Photo 16, Table 8	Refer to Photo 17, Table 9
	Average Furnace Heating Temperature	Refer to Photo 18	Refer to Photo 19
	Furnace Pressure	Refer to Photo 20, Table 8	Refer to Photo 21, Table 9
	Back-side Maximum Temperature(℃)	89. 6	92.4
	Back-side Maximum Average Temperature (℃)	83 .4	87.4
	1. In the heating test, the two Specimens did not produce openings that caused the cotton mat to ignite and the gauge penetrated. 2. In the heating test, no sustained flame of more than 10 seconds occurred on the two specimens on non-exposure surfaces. 3. In the heating test, the average temperature on the back of Specimen TW-161123-01 did not exceed 163.3 (initial average of 23.3+140)°C, and the temperature at any position did not exceed 203.3 (initial average of 23.3+180)°C, Specimen TW-161123-02 the average backside temperature did not exceed 164.0 (initial average of 24.0+140)°C, and the temperature at any location did not exceed 204.0 (initial average 24·0+180)°C. Fire resistance performance: Flammability 60 minutes, Heat resistance 60 minutes. Fire protection rating: Meets 1 hour fire protection time.		
Lab Supervisor	(with seal)	Test Operator	(with seal)

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II. Specimen Composition

Table 1 Specimen Composition Data

Specimen Name		LVKE fast- standing wall	
Specimen No.		TW-161123-01	TWq61123-02
Made Date		November 23, 2016	November 23, 2016
Test Date		November 29, 2016	November 29, 2016
Size		300cm	
		300cm	
	Thickness	113mm	
Board I	Name	D-20W Wallboard	
	Manufacturer	LVKE PREFABRICATED (SUZHOU) CO., LTD.	
	Total Thickness	20mm	
	Surface Density	16 kg/m2	
	Surface Fireproof Board1	Fireproof board, t=6mm。	
	Surface Fireproof Board 2	Fireproof board, t=3mm。	
	Inner Layer plastic steel plate	Material: PVC, specifications shown in Fig. 4.	
Board II	Name	Fiber cement board	
	Level symbols	I.0FPC	
	Manufacturer	HAPPY CHANCE ENTERPRISE LIMITED.	
	Thickness	9mm	
	Specific Gravity	0. 97 (provided by the entrusted Unit)	
	Water Content	9 .4% (provided by the entrusted Unit)	
Filler	Name	Rock wool	
	Manufacturer	Shanghai Kang Mei Shu Insulation Material Co., Ltd. (provided by the entrusted Unit)	
	Density	40 kg/m3	
	Thickness	50mm	
Other Parts	Upper and lower slot iron	77×30× 1.0mm	
	Column size	75 ×35 × 1.0mm , Spacing 305mm	
	Dimensions of transverse braces	38 × 12 × 1.0mm	
	Spacing of transverse braces	1200mm	
	Tapping Screw 1	D-20W Wall Plate Fixing screws, ¢ 4 · 0×40mm , 285/580mm (Plate middle zone)	
	Tapping Screw 2	Inner fiber cement board fixing screws, ¢ 4 , 5 ×40mm, Spacing 300mm	
	Tapping Screw 3	Lateral fiber cement board fixing screws, ¢ 4 · 5 ×50mm, Spacing 300mm	
	Sealant 1	AB Glue	

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	Sealant[1]Manufacturer	Min Tai Coating Co., Ltd.
	Sealant 2	Plaster Soil
	Sealant[2]Manufacturer	Min Tai Coating Co., Ltd.
	Joint Net	Fiber Net, width 50mm。

Note: This report provides structural details and specific components based on the test status and results obtained from the test procedures specified in CNs12514-1. Any significant differences in scale, construction details, load, stress, edge, or end conditions will invalidate the test results.

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