

Good fire resistance

สมบัติการทนไฟสูง



**FACULTY OF ENGINEERING
CHULALONGKORN UNIVERSITY
FIRE SAFETY RESEARCH CENTER**



- TYPE OF TEST** : DETERMINATION OF THE FIRE RESISTANCE OF NON-LOADBEARING ELEMENTS OF CONSTRUCTION
- TEST SPECIMEN** : **TEXCA WALL**
The specimen is a 3 m x 3 m vertical construction consisting of five 9 cm x 60 cm x 300 cm hollow-core lightweight wall panels with 5-mm thick plastering finishes on both sides. The specimen was installed on a 3 m x 3 m framework. The details of the specimen are shown in Appendix C. The specimen was provided and installed by the client
- CLIENT** : **SIAMESE ECOLITE CO., LTD.**
335/13-14 Srinakarin Rd., Nongbon
Pravet, Bngkok 10250, Thailand
- DATE OF TEST** : March 30, 2012
- TEST MACHINE** : Large-scale vertical furnace (Fire Tester III) at the Fire Safety Research Center, Department of Civil Engineering, Chulalongkorn University (Thailand). The furnace is capable of producing a standard temperature-time relationship according to BS476 Part 20: 1987.
- TEST METHOD** : The testing procedures follow the British Standard BS 476: Fire tests on building materials and structures
BS 476 Part 20: 1987 : Method for determination of the fire resistance of elements of construction (general principles)
BS 476 Part 22: 1987 : Methods for determination of the fire resistance of non-loadbearing elements of construction, Section 5: Determination of the fire resistance of partitions.
- TEST RESULTS** : The non-loadbearing element of construction described above has the fire resistance of each criterion for the period stated:
(The test results are good only for the specimen tested.)

Criteria	Fire Resistance (hr:min)	Remarks
Insulation	2:00	The average temperature of the unexposed face of the specimen exceeded 140°C above its initial value of 32°C.
Integrity	4:00	The test was terminated by the client without passage of flame or gases hot enough to ignite the cotton pad.

Tested by:
(Assistant Prof. Dr. Jaroon Rungamornrat)

Date: April 9, 2012

.....
(Associate Prof. Dr. Thanyawat Pothisiri)

.....
(Associate Prof. Dr. Tirawat Boonyatee)
On Behalf of Head of Civil Engineering Department

Good sound insulation

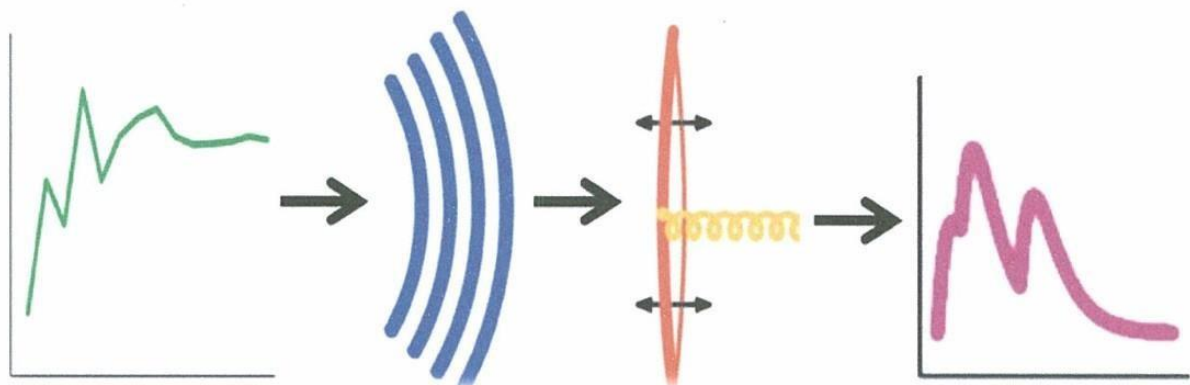
สมบัติการกั้นเสียงดี

LABORATORY REPORT ON

**SOUND TRANSMISSION-LOSS
MEASUREMENTS
OF THE TEXCA WALL PANEL**

Stimulus

Response



Sound transmission loss of TEXCAWALL 90 mm.

FOR...

SIAMESE ECOLITE CO., LTD.

April, 2013

Chula Unisearch, Chulalongkorn University

LABORATORY REPORT SOUND ABSORPTION COEFFICIENT AND SOUND TRANSMISSION-LOSS MEASUREMENTS
OF THE TEXCA WALL FOR SIAMESE ECOLITE CO., LTD.

Table 1. The airborne sound transmission-loss (TL) for each individual 1/3 octave band center frequency and STC rating of the test panel.

Test sample: TEXCA WALL thickness 90 mm.
 Test panel size: 3040 mm x 2440 mm.
 Temperature: 27 °c
 Relative humidity: 60 %

Frequency (Hz)	TL (dB)
125	36
160	30
200	28
250	31
315	34
400	34
500	37
630	39
800	40
1000	43
1250	46
1600	49
2000	50
2500	53
3150	55
4000	56

STC	41
Maximum Deficiency	6 dB
Sum of Deficiency	26 dB

Aheelasiri wong



Low thermal conductivity

สมบัติการนำความร้อนต่ำ



TEST REPORT

Sample's name

Precast Lightweight Aggregate Concrete

Mark / Brand

TEXCA® wall

Laboratory No.

L55/00528.1

Test Results

Thermal Conductivity at 23.5 °C, W/m-K

0.175

Customer's name

Siamese Ecolite Co., Ltd.

Customer's address

335/13-14 Srinakarin Rd., Nongbon, Pravet, Bangkok 10250

Sample's description

Precast Lightweight Aggregate Concrete
size: 300 mm x 300 mm x 25 mm

Test date

7 February 2012

Test method

ASTM C 518

Approved by

(Mr. Surin Athakitkarnka)

Scientist, Senior Professional Level

Reported by

(Ms. Kittiya Plermjai)

Scientist, Practitioner Level

This report is only valid for the sample received. The above statement is not intended for advertising purposes and shall not be reproduced or shall not manifest partially without the written permission of the Department of Science Service.

Department of Science Service, Ministry of Science and Technology

Rama VI Road, Ratchathewi, Bangkok 10400, Thailand

Low water absorption

สมบัติการดูดซึมน้ำต่ำ



**FACULTY OF ENGINEERING
CHULALONGKORN UNIVERSITY
ABSORPTION TEST OF BRICK**

Specimen from : บริษัท ไชมีส อีโคโนโลยี จำกัด

335/13-14 ถนนศรีนครินทร์ แขวงหนองบอน เขตประเวศ กทม. 10250


Specimen description : ก้อนอิฐมีรู hollow

Test results :

(The test results are good only for those specimens tested.)


Date : December 2, 2015

Tested by :


 (Assoc. Prof. Dr. Jaroon Rungamornrat)

No.	Size of Specimen			Weight of the Dried Specimen (g)	Weight of the Specimen after Immersion (g)	Weight of the Specimen (g)	Absorption (%)	Absorption (g/cm ³)
	Width (cm)	Length (cm)	Thickness (cm)					
1	9.08	25.34	19.55	5311.6	5561.6	5450.8	4.71	0.06
2	9.21	25.25	19.75	5319.4	5584.6	5459.8	4.99	0.06
3	9.10	25.35	19.72	5262.2	5547.4	5397.2	5.42	0.06
4	9.05	25.32	19.91	5238.2	5513.0	5383.4	5.25	0.06
5	9.01	25.52	19.56	5193.2	5469.6	5333.2	5.32	0.06

Additional remark :


 (Assoc. Prof. Dr. Tirawat Boonyatee)

On Behalf of

Head of Civil Engineering Department

High compressive strength

สมบัติความแข็งแรงสูง



**FACULTY OF ENGINEERING
CHULALONGKORN UNIVERSITY
COMPRESSION TEST OF CONCRETE BLOCK**

Specimen from : Siamese Ecolite Co., Ltd.

Date : March 6, 2012

335/13-14 Srinakarin Rd., Nongbon, Pravet, Bangkok 10250

Tested by :

T. Rj
(Assist. Prof. Dr. Tanate Srisirojanakorn)

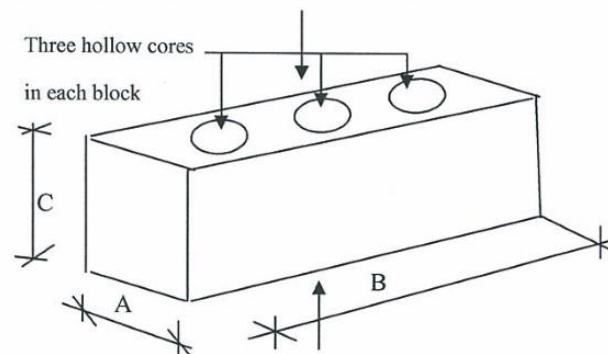
Specimen description : Hollow core lightweight concrete wall panel

Testing machine : Amsler No. 56/406 (500-ton capacity)

Test results :

(The test results are good only for those specimens tested.)

No.	Size of Specimen (cm)				Weight of Specimen (g)	Max. Load (kg)	Crushing Strength (kg/cm ²)	Remark
	A	B	C	Average diameter of hollow core				
1	8.74	26.50	20.30	5.27	4,786.4	35,000	211	
2	8.78	26.50	19.80	5.27	4,848.4	33,000	197	
3	8.90	26.50	19.60	5.27	4,846.0	30,000	176	
4	8.90	26.50	19.30	5.27	4,816.3	20,000	117	
5	8.80	26.50	20.10	5.27	4,965.2	35,000	209	



Akhrawat Lenwari
(Assoc. Prof. Dr. Akhrawat Lenwari)

On Behalf of
Head of Civil Engineering Department