

## รูปภาพ แสดงการทดสอบประตูเหล็กทนไฟ 2 ชั่วโมง แบบบานเดียว เรียบทึบ

ทดสอบตามมาตรฐาน BS476 Part 20 : 1987 , BS476 Part 22 : 1987



# ผลทดสอบการทนไฟ ของประตูเหล็กทนไฟ 2 ชั่วโมง แบบบานเดี่ยว เรียบทึบ

ทดสอบตามมาตรฐาน BS476 Part 20 : 1987 , BS476 Part 22 : 1987

Reference No. FSRC-021/55

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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** : **STEEL FIREPROOF DOOR (TRADEMARK : SPR TYPE : SFD8)**  
The specimen is a doorset consisting of a single-sided steel door leaf with a steel door frame. The dimensions of the door leaf are 900 mm x 2000 mm x 45 mm. The specimen was mounted in a 15 cm thick reinforced concrete wall, which was installed on the 3 m x 3 m testing frame. The door leaf consisted of 1.0-mm thick cold rolled steel panels and rockwool blankets with a density of 110 kg/m<sup>3</sup> in between. The door leaf was fixed with the door frame by a heavy duty mortise lock and 3 stainless hinges. The door frame was made of 1.0-mm thick cold rolled steel sheets. The details of the specimen are shown in Appendix C. The specimen was provided and installed by the client.
- CLIENT** : **SUPA RICH CO., LTD.**  
27 Soi Ramintra 48, Ramintra Road  
Khanmayao, Bangkok 10230, Thailand
- DATE OF TEST** : September 25, 2012
- TEST MACHINE** : Large-scale vertical furnace (Fire Tester III) at the Fire Safety Research Center (FSRC), Department of Civil Engineering, Chulalongkorn University (Thailand). The furnace is capable of producing a standard temperature-time relationship according to BS 476 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 6: Determination of the fire resistance of fully insulated doorsets and shutter assemblies.
- 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 | 0:12                     | The average temperature of the unexposed face of the specimen exceeded 140°C above its initial value of 30°C. |
| Integrity  | 2:05                     | The test was terminated by the client without passage of flame or gases hot enough to ignite the cotton pad.  |

Date: October 2, 2012

Tested by: .....  
(Assistant Prof. Dr. Vachan Peansupap)

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(Associate Prof. Dr. Thanyawat Pothisiri)

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

Fire Safety Research Center, Faculty of Engineering, Chulalongkorn University  
Phayathai Road, Pathumwan, Bangkok 10330, Thailand. Tel: (662) 251-8336 Fax: (662) 251-8337  
FM-LAB-04/02.01 (00)

Reference No. FSRC-021/55

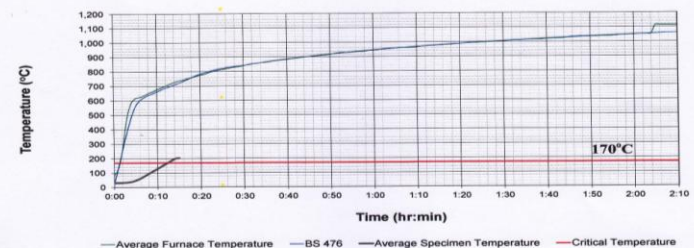
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## FURNACE TEMPERATURE



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(Mr. Nattawut Hemathulin)  
Authorized Testing Officer