

รูปภาพ แสดงการทดสอบประตูเหล็กทนไฟ 2 ชั่วโมง แบบบานเรียบ มีช่องกระจก พร้อมกระจกทนไฟ

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



ผลทดสอบการทนไฟ ของประตูเหล็กทนไฟ 2 ชั่วโมง แบบบานเรียบ มีช่องกระจก พร้อมกระจกทนไฟ

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

Reference No. FSRC-047/53

Page 1 of 16



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** : **SPR STEEL DOOR (TRADEMARK: SPR, TYPE: SFD2)**
The specimen is a doorset with a single-sided doorleaf having dimensions of 923 mm 2158 mm x 46 mm (Door frame size: 1000 mm x 2235 mm). The doorleaf consisted of 1.6-mm thick cold rolled steel plates with rockwool of 110 kg/m³ density in between and 5-mm thick FIRELITE glazing having dimensions of 150 mm x 400 mm at the location of approximately 200 mm above the door handle. The doorleaf was fixed with the doorframe using four FH 543 hinges having dimensions of 127 mm x 101.6 mm x 3 mm and a Heavy Duty Mortise Lock (M-Series). The details of the specimen are shown in Appendix C. The specimen was prepared and installed by the client.
- CLIENT** : **SUPA RICH CO., LTD.**
27 Ramintra Soi48, Ramintra Road, Ramintra
Kannayao, Bangkok 10230, Thailand
- DATE OF TEST** : September 2, 2010
- 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	0:20	The average temperature of the unexposed face of the specimen exceeded 140°C above its initial value of 30°C.
Integrity	2:01	The specimen had a passage of flame or gases hot enough to ignite the cotton pad.

Date: September 7, 2010

Tested by:
(Dr. Jittichai Rudjanakanoknad)

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

.....
(Associate Prof. Dr. Chatchart Sittipunt)

.....
(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)

ference No. FSRC-047/53

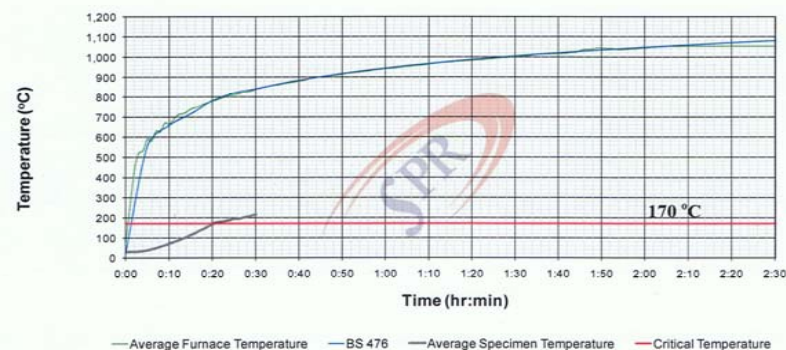
Page 2 of 16



FACULTY OF ENGINEERING
CHULALONGKORN UNIVERSITY
FIRE SAFETY RESEARCH CENTER



FURNACE TEMPERATURE



.....
(Mr. Nattawut Hemathulin)
Authorized Testing Officer