



**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** : **DM.8V**
The specimen is a doorset consisting of a single-sided composite door leaf having dimensions of 2000 mm x 900 mm x 40 mm with a 170 mm x 570 mm vision panel and a steel door frame. The vision panel was made of 6-mm thick Pyran S glass. The specimen was mounted in a 15-cm thick reinforced concrete wall, which was installed on the 3 m x 3 m steel testing frame. The door leaf consisted of 1.6-mm thick cold roll steel sheets and rock wool with a density of 110 kg/m³. The door leaf was locked with the door frame by a panic bar and 3 stainless steel hinges. Intumescent fire seal was installed around the edge of the door leaf. The details of the specimen are shown in Appendix C. The specimen was provided and installed by the client.
- CLIENT** : **THAI STEEL DOOR CO., LTD.**
89 moo 14 Kingkaew Road, Rajateva, Bangplee
Samutprakan 10540, Thailand
- DATE OF TEST** : August 26, 2013
- 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 maximum temperature of the unexposed face of the specimen exceeded 180°C above the initial mean unexposed face temperature of 33°C.
Integrity	2:33	The specimen had a passage of flame or gases hot enough to ignite the cotton pad.

Date: September 2, 2013

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