



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

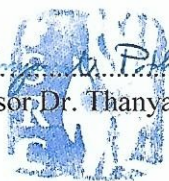


- TYPE OF TEST** : DETERMINATION OF THE FIRE RESISTANCE OF NON-LOADBEARING ELEMENTS OF CONSTRUCTION
- TEST SPECIMEN** : **DM-2**
The specimen is a doorset consisting of single-sided steel door leaf and a steel door frame. The dimensions of the door leaf are 2200 mm x 1000 mm x 45 mm. The specimen was mounted in a 15-cm thick reinforced concrete wall, which was installed on the 3.5 m x 3.5 m testing frame. The door leaf consists of 1-mm thick electro galvanized steel sheets and polyurethane foam with a density of 40 kg/m³ in between. The door leaf is locked with the door frame by a lockset and three hinges. The details of the specimen are shown in Appendix C. The specimen was provided and installed by the client.
- CLIENT** : **THAI STEEL DOOR LIMITED PARTNERSHIP**
89 Moo 14 Kingkaew Road, Rajateva, Bangplee
Samutprakan 10540, Thailand
- DATE OF TEST** : December 4, 2018
- TEST MACHINE** : Large-scale vertical furnace at the Fire Safety Research Center (FSRC), Department of Civil Engineering, Chulalongkorn University in Saraburi province, 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.)

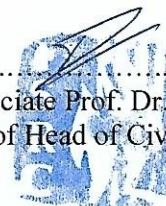
Criteria	Fire Resistance (hr:min)	Remarks
Insulation	0:16	The maximum temperature of the unexposed face of the specimen exceeded 180°C above the initial mean value of 29°C.
Integrity	1:50	Sustained flaming on the unexposed face of the specimen.

Date: December 20, 2018

Tested by:
(Professor Dr. Thanyawat Pothisiri)



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

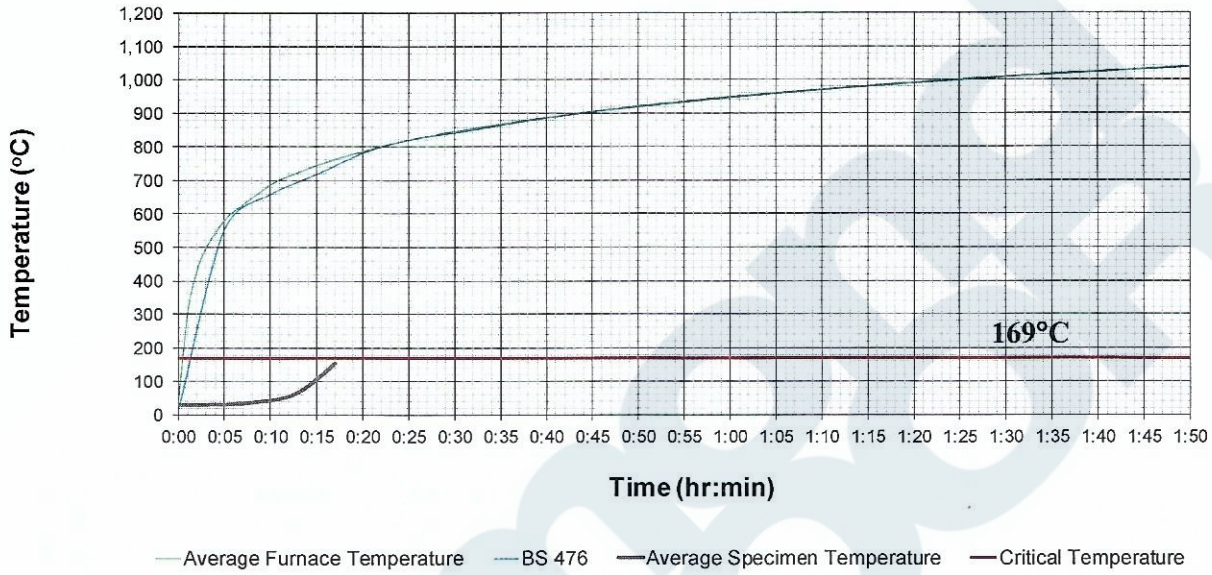




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FURNACE TEMPERATURE



(Signature)
(Mr. Sirichai Pethrung)
Authorized Testing Officer