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 : **DSS 8 [120x250 cm]**

The specimen is a doorset consisting of a single-sided composite door leaf having dimensions of 2492 mm x 1192 mm x 45 mm and a steel door frame. The specimen was mounted in a 15-cm thick reinforced concrete wall, which was installed on the 3.5 m x 3.5 m steel testing frame. The door leaf is composed of 1.6-mm thick stainless hair line 304 sheets and rock wool with a density of 110 kg/m^3. The door leaf was locked with the door frame by a door handle and 5 stainless steel hinges. Smoke fire seal was installed around the inner perimeter of the door frame. 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 : July 25, 2020

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	0:39	The maximum temperature of the unexposed face of the specimen exceeded 180°C above the initial mean value of 29°C.
Integrity	2:00	The test was terminated by the client. During the test, all integrity criteria were fulfilled (no sustained flaming and no through gap such that the 6 mm diameter gap gauge could penetrate).

Date: August 7, 2020

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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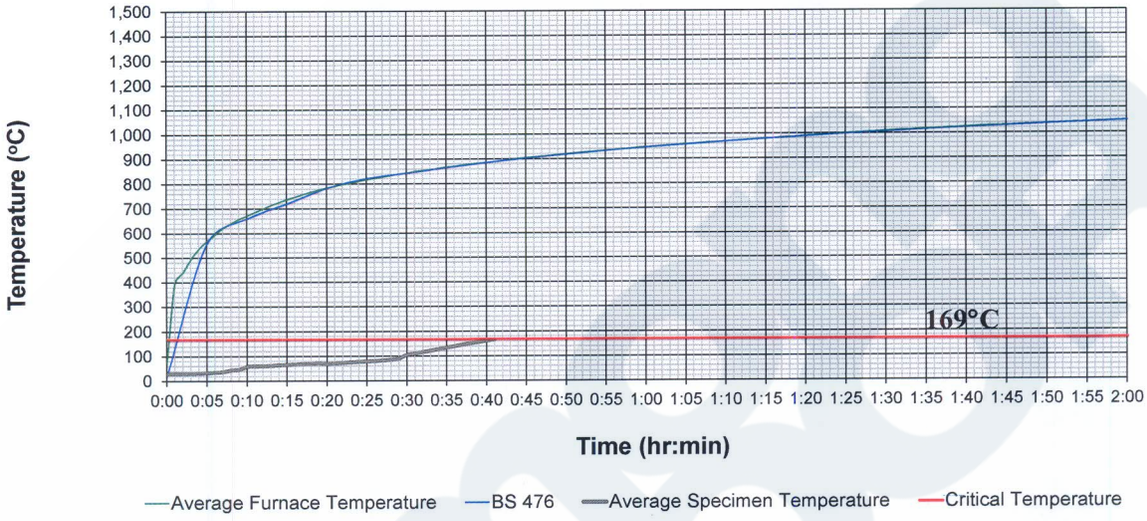
FURNACE TEMPERATURE



(Mr. Sirichai Pethrung)
Authorized Testing Officer