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 8**

The specimen is a doorset consisting of a single-sided composite door leaf having dimensions of 2400 mm x 1000 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 m x 3 m steel testing frame. The door leaf consists of 1.6-mm thick zinc electro galvanized steel sheet and rock wool with a density of 100 kg/m^3. The door leaf was locked with the door frame by a panic bar and 4 stainless steel hinges. Smoke fire seal was installed around the edge 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 : June 18, 2018

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	0:31	The average temperature of the unexposed face of the specimen exceeded 140°C above its initial value of 31°C.
Integrity	4:00	The test was terminated by the client without passage of flame or gases hot enough to ignite the cotton pad.

Date: July 2, 2018

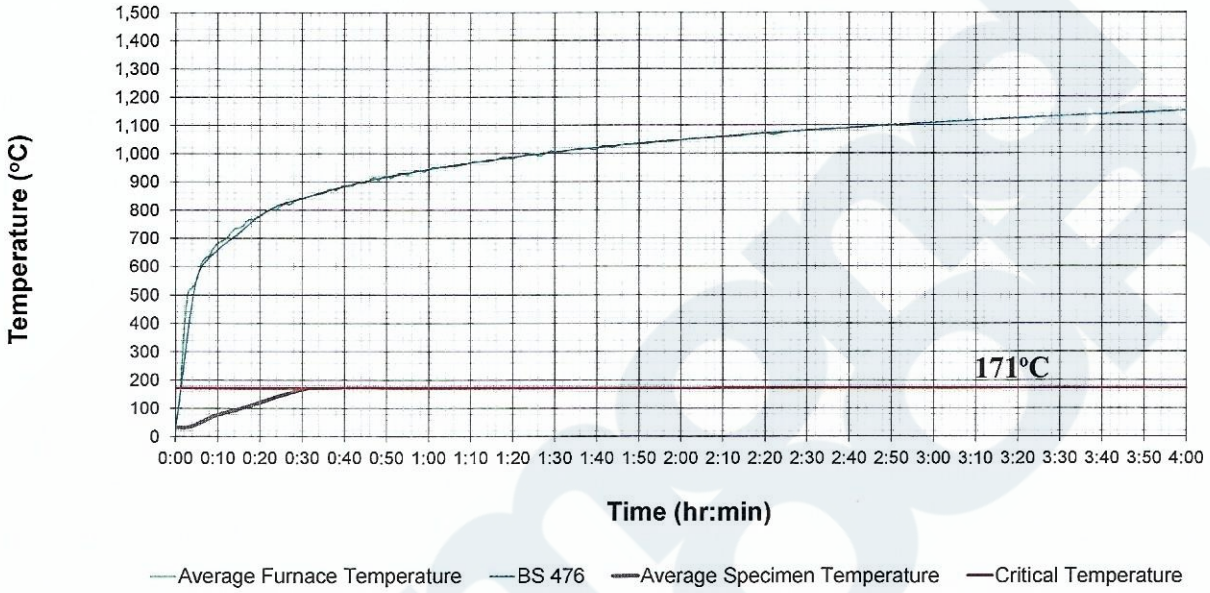
Tested by: .....
(Associate Prof. Dr. Withit Pansuk)

.....
(Professor. Dr. Thanyawat Pothisiri)

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

FACULTY OF ENGINEERING
CHULALONGKORN UNIVERSITY
FIRE SAFETY RESEARCH CENTER

FURNACE TEMPERATURE



(Mr. Sirichai Pethrung)
Authorized Testing Officer