FACULTY OF ENGINEERING
CHULALONGKORN UNIVERSITY
FIRE SAFETY RESEARCH CENTER

TYPE OF TEST : POSITIVE PRESSURE FIRE TEST OF DOOR ASSEMBLIES

TEST SPECIMEN : **DM 8**

The specimen is a doorset consisting of a single-sided composite door leaf having dimensions of 2000 mm x 900 mm x 45 mm and a steel door frame. The door leaf consists of 1.6-mm thick zinc electro galvanized steel sheet and rock wool with a density of 110 kg/m^3. 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, such that the door opened into the furnace chamber. The door leaf was locked with the door frame by a doorknob and 3 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 21, 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 several fire resistance standards including UL 10C.

TEST METHOD : The testing procedures follow UL 10C: Positive pressure fire tests of door assemblies for a desired fire rating of 3:00 hr.

TEST RESULTS : The test assembly described above has withstood the fire endurance classification period and hose-stream test as stated in the table below:
(The test results are good only for the specimen tested.)

Criteria	Fire Resistance (hr:min)	Remarks
Integrity	3:00	No flaming occurred on the unexposed surface of the door for the fire test duration of 180 minutes.
Hose Stream Test	Passed	• No portion of the door edges adjacent to the door frame moved from the original position greater than 1½ times the door thickness as a result of the hose stream test. • The latch bolt remained projected and intact after the test. • The door frame remained securely fastened to the wall on all sides.

Date: July 5, 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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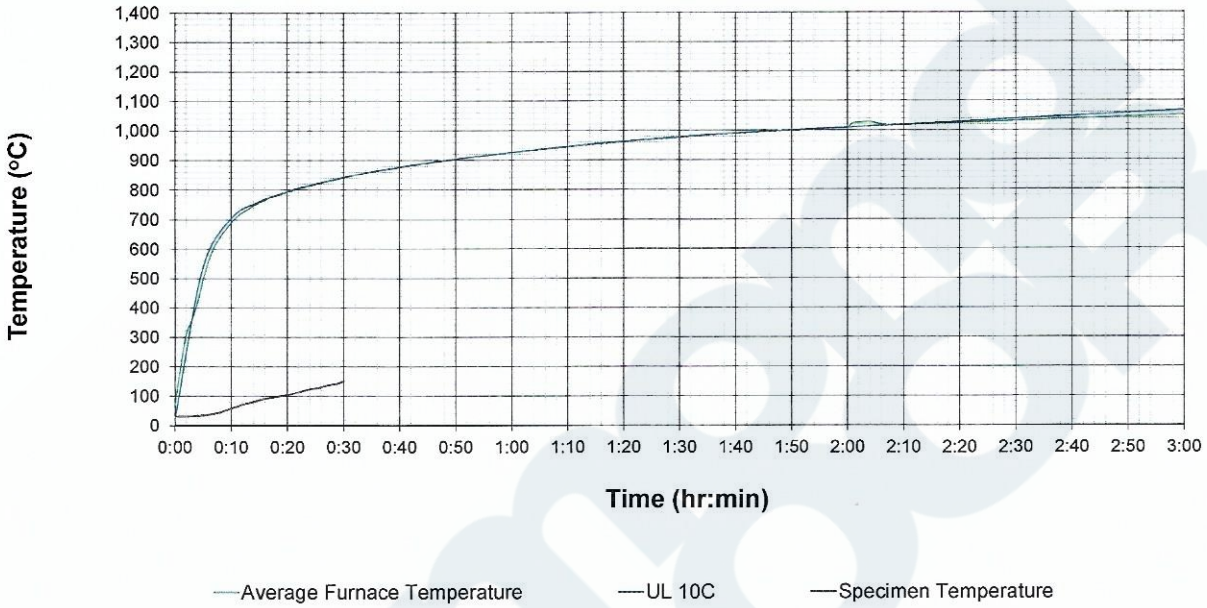
FURNACE TEMPERATURE



(Mr. Sirichai Pethrung)
Authorized Testing Officer