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 (90x200 Inside Frame)**
The specimen is a doorset consisting of a single-sided steel door leaf having dimensions of 1992 mm x 892 mm x 40 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 testing frame. The door leaf consisted of 1.6-mm thick cold rolled steel sheets with rock wool blankets of 110 kg/m^3 density in between. The door leaf was locked with the door frame by a panic bar (vertical type). Fire seal was installed around 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 LIMITED PARTNERSHIP**
89 Moo 14 Kingkaew Road, Rajateva
Bangplee, Samutprakan 10540, Thailand

DATE OF TEST : October 27, 2010

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: November 3, 2010

Tested by: .... (Associate Prof. Dr. Suched Likitlersuang)

.... (Associate Prof. Dr. Thanyawat Pothisiri)

.... (Associate Prof. Dr. Chadchart Sittipunt)

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