Reference No. **FTL-02/43**

FACULTY OF ENGINEERING
CHULALONGKORN UNIVERSITY
FIRE TESTING LABORATORY

TYPE OF TEST : DETERMINATION OF FIRE RESISTANCE OF NON-LOADBEARING ELEMENTS OF CONSTRUCTION

TEST SPECIMEN : **FULLY INSULATED METAL FIRE DOOR**

DOOR TYPE	:	FIRE RESISTANT STEEL DOOR (SD)
MODEL	:	SD (ROCKWOOL)
DOOR INFILL	:	ROCKWOOL (Density 110 kg/m^3)
FRAME TYPE	:	Single rebate and fire resistant seal Material SPCC 1.6t (with sill and primer coating)
FRAME SIZE	:	2038 x 2135 mm.
DOOR SIZE	:	2 x 1013 x 2110 mm (Double door)
DOOR HINGE	:	PLUS K-42-H
DOOR CLOSER	;	DIAHATSU NHN-184
FLUSH BOLT	:	HIWIN

The specimen was mounted in an 15-cm thick reinforced concrete wall, which was cast to the testing frame. Details of the specimen is shown in Page 3 of this report. The specimen was provided and installed to the testing frame by the client.

CLIENT : SUN METAL CO.,LTD.

DATE OF TEST : April 11, 2000

TEST MACHINE : Large-scale furnace at the Fire Testing Laboratory, Department of Civil Engineering Chulalongkorn University. The furnace is capable of producing a standard temperature-time relationship according to several fire resistance standards including BS 476 Part 20: 1987.

TEST METHOD : 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 element of construction described above satisfied the following criteria for fire-resistance for the period stated: (The test results are good only for the specimen tested.)

Criteria	Fire Resistance	Remarks
Insulation	**61 minutes**	Average increase in temperature on an unexposed face of the right door exceeded 140 °C
Integrity	**240 minutes**	No failure observed at 241 minutes

Date : May 22, 2000

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(Assistant Prof.Dr.Boonchai Stitmannaithum)
On behalf of Head of Civil Engineering Department

Tested by .....

(Dr.Chadchart Sittipunt)