



**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** : **CONWOOD BOARD TCS**
The specimen is a 3 m x 3 m vertical construction consisting of a single layer of 11 mm thick fiber cement boards in a sandwich construction. The fiber cement boards were installed to a 3 m x 3 m testing frame using a single layer of C-Stud (Galvanized Steel) No.24 as the vertical struts and as the top and bottom edges. The fiber cement boards were fixed to the C-Stud frame using 32 mm self drilling screws at 15 cm spacing. The details of the specimen are shown in Appendix C. The specimen was provided and installed by the client.
- CLIENT** : **CONWOOD CO., LTD.**
Column Tower, 7th -12th Fl., 199 Ratchadapisek Rd., Klongtoey
Bangkok 10110, Thailand
Tel: (662) 797-7444 Fax: (662) 797-7004
- DATE OF TEST** : September 17, 2008
- TEST MACHINE** : Large-scale vertical furnace (Fire Tester III) at the Fire Safety Research Center, Department of Civil Engineering, Chulalongkorn University (Thailand). The furnace is capable of producing a standard temperature-time relationship according to BS476 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 5: Determination of the fire resistance of partitions.
- 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	0:21	Integrity failed. The test was terminated.
Integrity	0:21	The 6 mm diameter gap gauge could penetrate through a gap such that the end of the gauge projected into the furnace and the gauge could be moved in the gap for a distance of at least 150 mm.

Tested by:
(Assistant Prof. Dr. Tanate Srisirojanakorn)

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(Associate Prof. Dr. Chadchart Sittipunt)

Date: September 29, 2008

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(Associate Prof. Dr. Thanyawat Pothisiri)

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(Assistant Prof. Dr. Chatpan Chintanapakdee)
On Behalf of Head of Civil Engineering Department

APPENDIX D: PHOTOGRAPHS

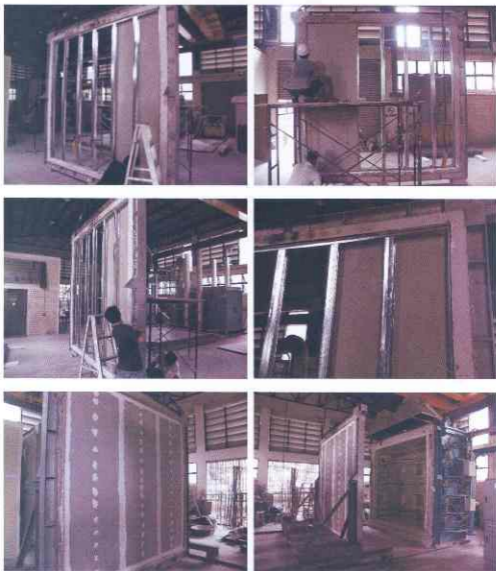


Figure D-1: Specimen preparation prior to testing



(Mr. Pongsak Malai)
Authorized Testing Officer



(a) 0:00 hr



(b) 0:00 hr



(c) 0:11 hr



(d) 0:15 hr



(e) 0:15 hr



(f) 0:16 hr

Figure D-2: The specimen during testing





(g) 0:18 hr



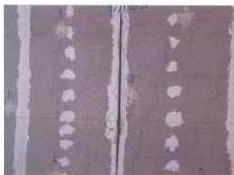
(h) 0:20 hr



(i) 0:21 hr



(j) 0:21 hr



(k) 0:21 hr



(l) 0:21 hr

Figure D-2 (continued); The specimen during testing

(Mr. Perigak Malai)
Authorized Testing Officer



Figure D-3: The specimen after testing.