

COMMERCIAL TESTING COMPANY

STANDARD TEST METHODS FOR FIRE TESTS
OF BUILDING CONSTRUCTION AND MATERIALS

ASTM E 119

Description of Test: Nonbearing 8-inch Lightweight Concrete
Block Wall Filled with PolyMaster R-501
Foam Insulation

Report Number 100005

Test Number 2587-4451
October 18, 1994

Prepared for:

PolyMaster, Inc.
Knoxville, Tennessee

Erle W. Miles, Jr.
President



TESTING • RESEARCH • ENGINEERING

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ABSTRACT

On October 18, 1994, a nonbearing wall assembly was tested for PolyMaster, Inc., of Knoxville, Tennessee. The test was conducted in accordance with ASTM Test Method E 119-88, "Standard Test Methods for Fire Tests of Building Construction and Materials," Tests of Nonbearing Walls and Partitions.

The wall consisted of eight courses of lightweight 8-inch concrete block, a single course of 4-inch cap block, and finished with eight courses of 8-inch lightweight concrete block. The cavities inside the blocks were pressure filled with PolyMaster R-501 Foam Insulation.

The objective of the test was to evaluate the duration of the assembly, constructed of materials conforming in quality and physical properties described in this report, to contain a fire and retain its structural integrity during a predetermined test exposure. The test exposes a specimen to a standard fire exposure controlled to achieve specified temperatures throughout a specified time period, followed by the application of a specified standard fire hose stream. Although the exposure may not be representative of all fire conditions, it does provide a relative measure of the fire performance of comparable assemblies under specific fire exposure conditions.

It is the intent that classifications shall register performance during the period of exposure and shall not be construed as having determined suitability for use after fire exposure.

The wall assembly tested performed satisfactorily for a Fire Resistance Rating of 2-3/4 Hours.

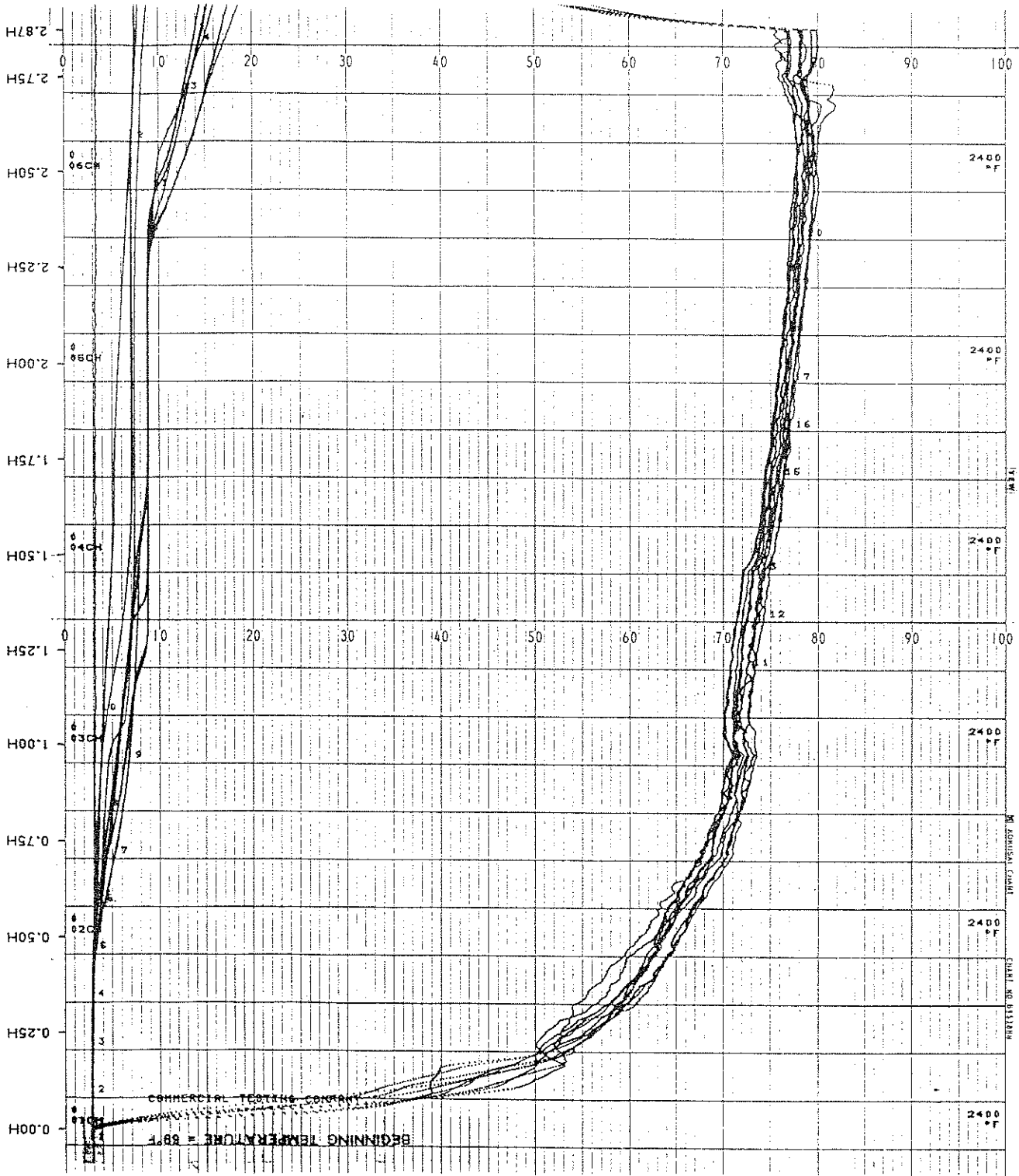


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T E M P E R A T U R E C U R V E S



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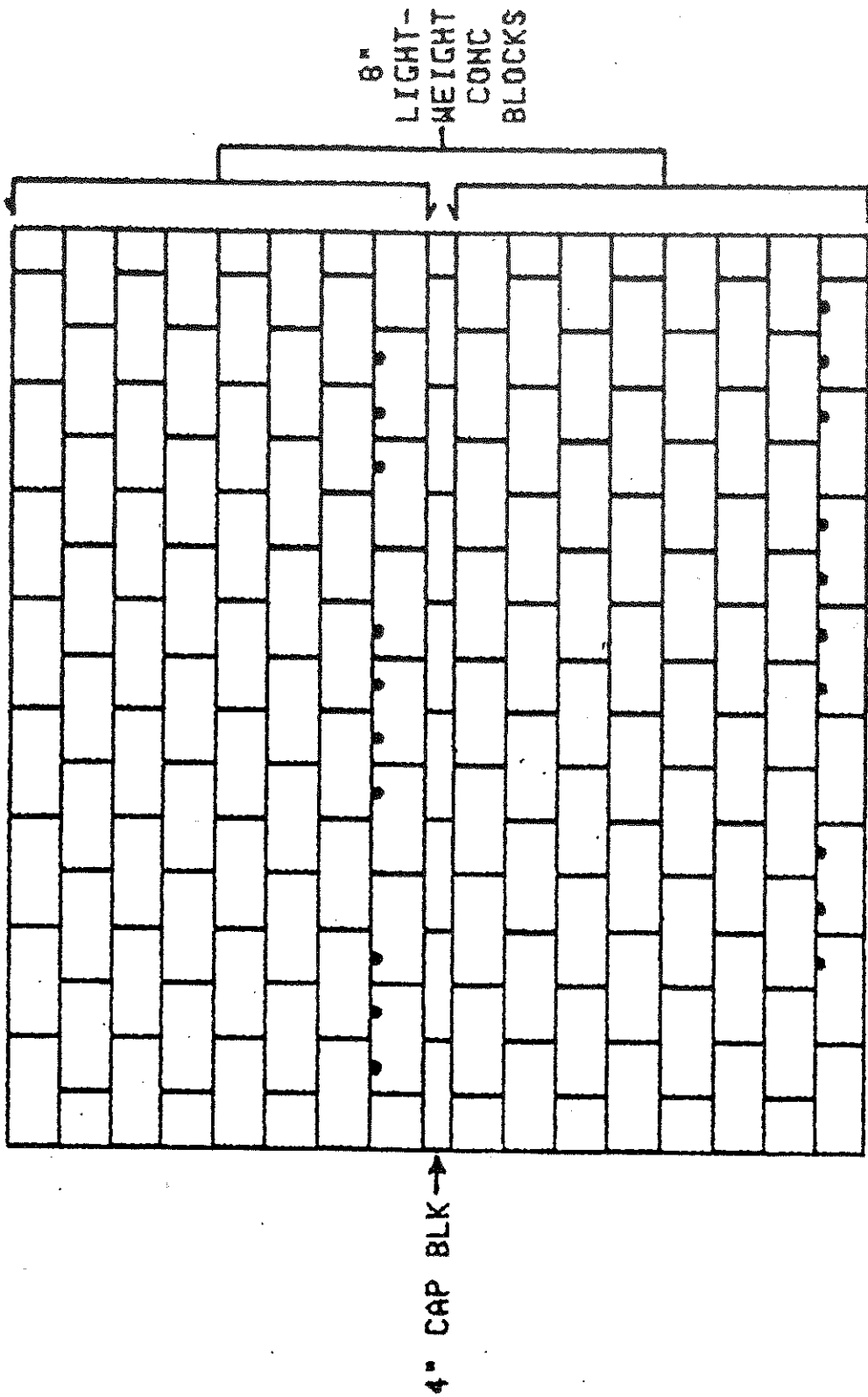
500cm

515cm

C O N S T R U C T I O N D R A W I N G



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P H O T O G R A P H S



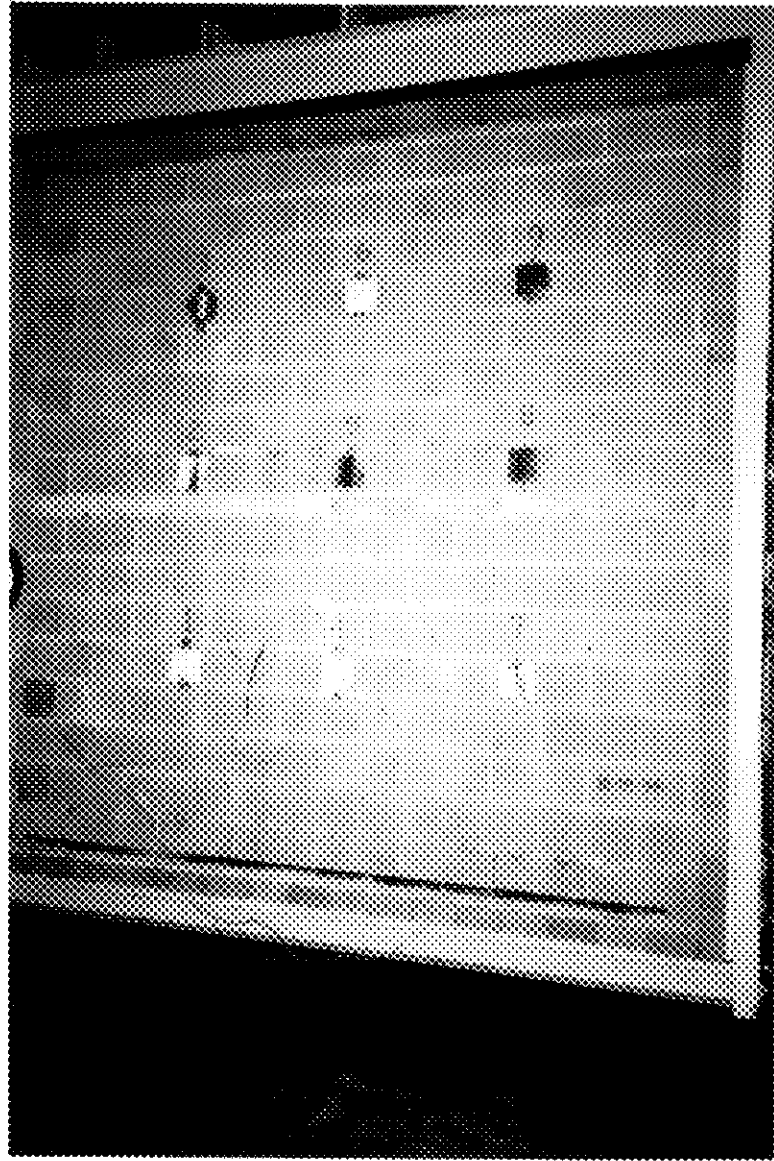
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Insulation Application



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Unexposed Face Prior to Test
Thermocouples in Place



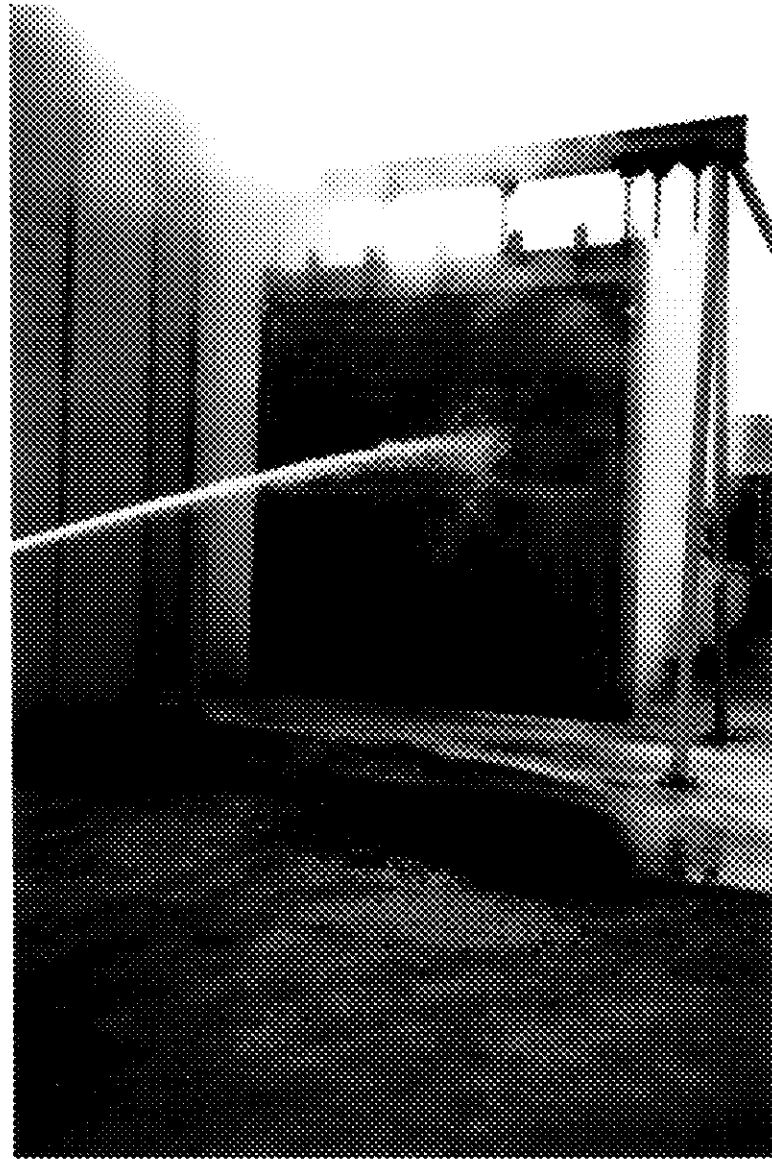
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Unexposed Face after Test
Prior to Rose Stream



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Hose Stream Test



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Exposed Face After Hose Stream Test.



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