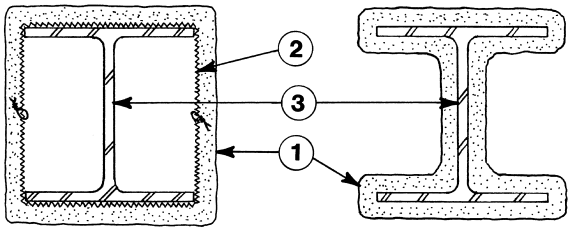
Design No. X764

Ratings — 1, 1-1/2, 2, 3 and 4 h.



1. **Spray-Applied Fire Resistive Materials* —** Prepared by mixing with water according to instructions on each bag of mixture and spray- or trowel- applied to steel surfaces which are free of dirt, oil or scale. Min avg density of 44 pcf with min ind value of 40 pcf for Type M-II. Min avg density of 44 pcf with min ind value of 42 pcf for Type TG. For method of density determination, see Design Information Section, Sprayed Material.

   The thickness of Spray-Applied Fire Resistive Materials (Item 1) required for rating periods of 1 h, 1-1/2 h, 2 h, 3 h, 4 h may be determined by the equation:

$$h = \frac{R}{0.86\ (W/D) + 0.97}$$

   Where:
   h=Spray-Applied Fire Resistive Materials thickness in the range of 0.35-2.50 in.
   R=Fire resistance rating in hours (1 - 4 h)
   D=Heated perimeter of steel column in inches
   W=Weight of steel column in lbs per foot
   W/D=0.50 to 7.00

   As an alternate to the equation, the minimum thickness of Spray-Applied Fire Resistive Materials required for various fire resistance ratings of contour or box sprayed columns may be determined from the table below:

Min Col Size	W/D	Min Thk In. 1 Hr	1-1/2 Hr	2 Hr	3 Hr	4 Hr
W6x9	0.33	1	1-3/8	1-11/16	2-3/8	3
W6x12	0.43	15/16	1-1/4	1-9/16	2-3/16	2-13/16
W6x16	0.57	11/16	1-1/16	1-3/8	2-1/16	2-11/16
W8x28	0.67	13/16	1-1/16	1-5/16	1-13/16	2-5/16
W10x49	0.83	5/8	15/16	1-3/16	1-5/8	2
W12x106	1.46	1/2	3/4	1	1-7/16	1-7/8
W14x233	2.52	3/8	1/2	11/16	1	1-1/4
W14x730	6.68	3/8	3/8	3/8	1/2	5/8

The thickness of Spray-Applied Fire Resistive Materials contained in the table below are applicable when the protection of the contour sprayed column's flange tips are reduced to one-half.

Min Col Size	W/D	Min Thk In. 1 Hr	1-1/2 Hr	2 Hr	3 Hr	4 Hr
W6x16	0.57	13/16	1-1/4	1-11/16	2-1/2	3-5/16
W10x49	0.83	3/4	1-1/8	1-7/16	2-3/16	2-7/8
W14x233	2.52	7/16	5/8	13/16	1-3/16	1-9/16
W14x730	6.68	3/8	3/8	3/8	9/16	3/4

BERLIN CO LTD —Types M-II or TG. Types M-II and TG investigated for exterior use.
ISOLATEK INTERNATIONAL — Types M-II or TG. Types M-II and TG investigated for exterior use.
LUCKY CORE INSULATING MATERIALS MANUFACTURING L L C —Types M-II or TG. Types M-II and TG investigated for exterior use.
NEWKEM PRODUCTS CORP —Types M-II or TG. Types M-II and TG investigated for exterior use.

2. **Metal Lath (for box spray application) —** 3.4 lb/sq yd galv or painted expanded steel lath. Lath shall be lapped 1 in. and tied together with No. 18 SWG galv steel wire spaced vertically 14 in. O.C. or alternately, attached with No. 24 MSG spring clips, 1/2 in. wide, pushed onto column flanges, vertically spaced 6 in. O.C.
3. **Steel Column —** Minimum Size — W6X16 (see Item No. 1).
4. **Reinforcing Mesh or Metal Lath —** (Both optional, not shown, for contour spray applications)— Reinforcing mesh, No. 18 SWG galvanized or painted steel wire twisted to form 2 in. hexagons. Mesh placed on column flanges and secured in position by means of furring clips (Item No. 5). As an alternate to reinforcing mesh, galvanized or painted expanded steel lath weighing 3.4 lb per sq yd may be used. Lath secured to column by bending tightly around the flanges a minimum of 1-1/2 in. toward the web of the column.
5. **Furring Clips (not shown, for contour spray applications) —** Required for use with reinforcing mesh. No. 18 SWG, U-shaped galvanized steel wire, 1 in. deep with 1-1/2 and 1-3/4 in. legs. Spaced vertically 12 in. O.C. on each flange over mesh.

*Bearing the UL Classification Mark