FILE NAME: WR Grace (WRG)

DATE: 1970

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DOCUMENT DESCRIPTION: 1970 Architectural Catalog File on Mono-Kote fireproofing.

Architectural Catalog File

Sweet's Construction Division
McGraw-Hill Information Systems Company
330 W. 42nd St., New York, N.Y. 10036

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1970

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MONO-KOTE®

Mono-Kote is the trade name for a fire protection material developed by Construction Products Division, W. R. Grace & Co., specifically for fast application, high fire resistance, and low cost. The material is spray applied by any one of several plastering machines. Mono-Kote is a cementitious, mill-mixed material requiring only the addition of water at the job. It is applied directly to steel, concrete and other surfaces requiring fire protection.

SPRAY-ON FIREPROOFING

TECHNICAL DATA

FIRE RESISTANCE: Mono-Kote has been tested and rated according to ASTM E-119 by the Underwriters' Laboratories, Inc. The material bears the U. L. label under a quality control inspection program. Fire resistance ratings and details for varied structural systems are available on request. Mono-Kote has been tested for other properties such as corrosion resistance, deflection, bond-impact, surface hardness. These tests comply with G.S.A. requirements and are available upon request.

FIRE HAZARD: Tested and reported in accordance with ASTM E-84 by Underwriters' Laboratories, Inc. Flame Spread-10, Fuel Contributed- 5, Smoke Developed-0.

DRY DENSITY: Approximately 22 p.c.f. U. L., Inc. lists 18 p.c.f. minimum average density.

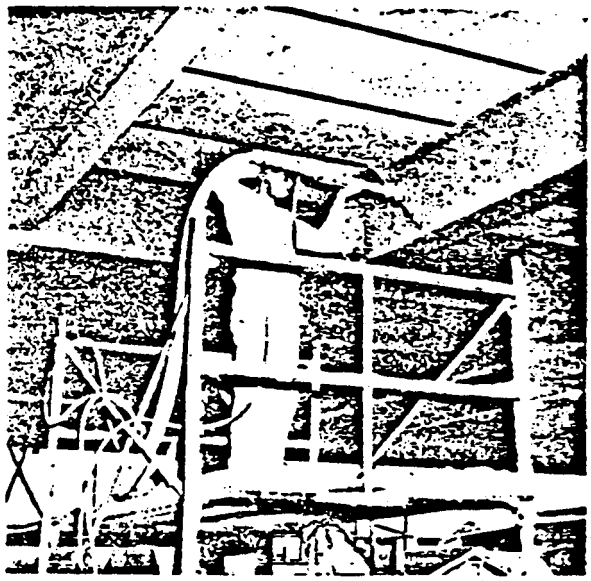
STRENGTH TO STEEL OR CONCRETE: More than 500 lb. per sq. ... set and dry.

COMPRESSIVE STRENGTH: (2 in. cubes): More than 70 psi.

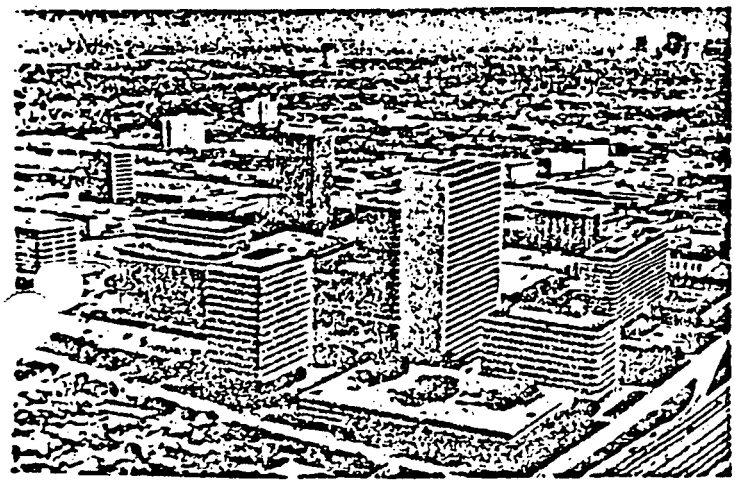
RESISTANCE TO AIR EROSION: Independent laboratory test subjected standard, machine-applied Mono-Kote surface to winds exceeding hurricane velocity . . . over 100 M.P.H. for 87 hours . . . with no erosion. Copies of test description available.

SOUND ATTENUATION: The combination of beams and ceiling when fireproofed with Mono-Kote gives sound absorption of .50 to .85 depending upon the ratio of beam area to flat area. This is of value to the designer in accomplishing attenuation objectives, especially when the fireproofed area is part of a plenum above a finished ceiling.

SPECIFICATION (SHORT FORM): Sprayed fireproofing material shall be Mono-Kote as manufactured by Zonolite, Construction Products Division, W. R. Grace & Co. or its processing distributor. It shall be applied by machine to the thickness required by local codes and in the areas shown on the drawings. The method of mixing and application shall comply with the manufacturers recommendations.



Direct application of Mono-Kote to beams and floors put fireproofing out of the way of mechanical installations.

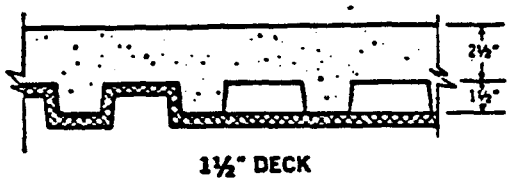
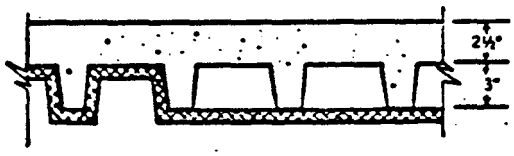
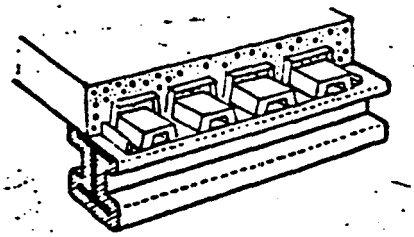
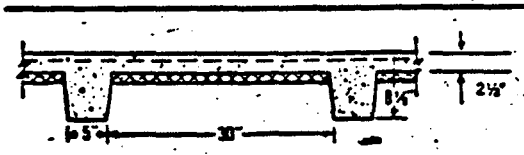
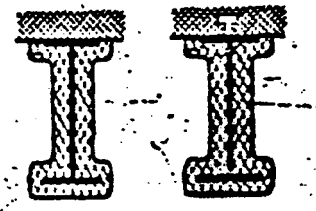
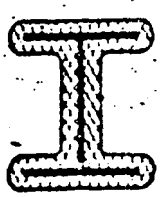




SWEET'S
1970

...JNOLITE® MONO-KOTE® FIRE RESISTANCE RATINGS

(PARTIAL SUMMARY)

SYSTEM	DESCRIPTION	RATING	Underwriters' Laboratories, Inc. Number	Retardant Report
 1½" DECK	2½" Concrete Fill-Mono-Kote ⅞" Thick Following Contour.	3 hrs.	21-3	4374
	2½" Concrete Fill Mono-Kote ⅜" Thick Following Contour.	2 hrs.	294-2	4374-31
 3" DECK	2½" Concrete Fill Mono-Kote 1⅜" in flute and 1⅛" on flat plate.	3 hrs.	52-3	4374-18
	2½" Concrete Fill-Mono-Kote ⅝" in flute and ⅞" on flat plate.	2 hrs.	228-2	4374-18
 COMPOSITE FLOOR - BEAM	2½" Concrete Fill-Mono-Kote 1" in flute and ¾" on flat plate.	3 hrs.	205-3	4374-26
	2½" Concrete Fill-Mono-Kote ½" in flute and ⅜" on flat plate.	2 hrs.	257-2	4374-25
 PAN JOIST	2½" Concrete Slab Mono-Kote ⅞" Thick under slab.	2 hrs.	99-2	4374-9
 BEAMS	½" Mono-Kote following contour of the member.	4 hrs.	40-4	4374-24
	Composite beam (shear strap on stud). ¾" ½"	 4 hrs. 3 hrs.	 257-2 216-3	 4374-25 4339
 COLUMNS	Mono-Kote following contour of the Column — Min 14WF228 1¼" ⅞"	 4 hrs. 3 hrs.	 37-4 32-3	 4374-21-23 4374-21-23
	All Columns 2½" 1⅞" 1½"	 4 hrs. 3 hrs. 2 hrs.	 15-4 17-4 7-2	 4374-8 4374-13 4374-13
	Minimum Column 14WF228 — Mono-Kote with ⅞" U. L., Inc. approved board on one flange. 1½" 1⅛" ¾"	 4 hrs. 3 hrs. 2 hrs.	 46-4 37-3 22-2	 4374-30 4374-30 4374-30

SWEET'S 1970

SPECIFICATIONS

1. SCOPE
   a) Work Included
   Provide all labor, materials and equipment required for complete installation of all sprayed fireproofing and related work as shown on the drawings or specified herein, and in accordance with all applicable requirements of the Contract Documents.
   b) Work Not Included
   1. Structural Steel encased in Concrete.
   2. Trowelled plaster fireproofing in specified under appropriate section.
   3. The cleaning of the surfaces to receive sprayed fireproofing.
   c) Codes and Regulations
   This specification shall be supplemented by the applicable requirements of the Building Codes and all authorities having jurisdiction. Conflicts and/or discrepancies between Contract Documents, ordinances, etc., noted by the subcontractor shall be immediately brought to the architect's attention.

2. MATERIALS
   a) The sprayed fireproofing shall be cementitious setting-type, and shall be Mono-Kote as manufactured by Construction Products Division, W. R. Grace & Co., or its processing distributors.
   All manufactured materials shall be mill-mixed and shall be delivered in original, unopened packages bearing the name of the product, the manufacturer's name and the Underwriters' Laboratories, Inc. Label. The materials shall be stored off the ground, under cover, and away from damp surfaces. Materials shall be kept dry until ready for use. Materials that have been exposed to water before actual use shall be discarded.
   b) Water shall be clean, fresh and free from organic and mineral impurities which would be harmful to the sprayed fireproofing materials.

3. ACCEPTANCE AND PERFORMANCE CRITERIA
   a) The sprayed fireproofing shall have been tested by Underwriters' Laboratories, Inc. in accordance with the procedures of ASTM E-119. The structural steel members shall be protected with adequate fireproofing thicknesses and densities to provide the following fire resistance ratings:
   Steel Columns . . . . . -Hours
   Primary steel members (Girders) . . . . . -Hours
   Secondary steel members (Beams) . . . . . -Hours
   b) The sprayed fireproofing beneath the deck assembly together with adequately proportioned concrete fill above the metal decking, shall provide a -Hour fire resistant deck assembly as substantiated by a fire test in accordance with the procedures of ASTM E-119, and performed by Underwriters' Laboratories, Inc.
   c) Minimum bond strength between the fireproofing material and the structural steel or galvanized decking shall be P.S.F.
   d) The fireproofing material shall not be subject to losses from the finished application by sifting, flaking or dusting. This performance shall be measured by the results of a test for erosion resistance when subjected to high velocity *air flow across* the surface of dried samples. The samples thus tested *must be* representative of machine applied material similar to that which can be expected on the project. The *air velocity* shall be not less than feet per minute, and the duration of the test shall be at least hours.
   e) Material shall not crack or delaminate when the structural element is subjected to downward deflection of 1/120 of the span.
   f) Minimum bond strength between the fireproofing material and the structural steel or galvanized decking shall be 400 p.s.f.
   g) Documentation of the above performance shall be submitted with the bid, in order that all parties will fully understand the intention of application performance at that time.

4. SAMPLES
   Samples of sprayed fireproofing shall be submitted for approval in accordance with the applicable provisions of the Special Conditions. These samples shall be representative of the material as applied in accordance with Acceptance & Performance Criteria as stated below.

5. INSTALLATION
   a) Application of sprayed fireproofing shall be in accordance with the printed instructions of the material manufacturer and the fire test report information.
   b) Only experienced applicators, approved by the materials manufacturer and Architect shall be allowed to place the materials. Upon request a qualified manufacturer's representative can be present for initial application to guide and assist applicator's personnel.
   c) All surfaces to which sprayed fireproofing will be applied shall be thoroughly cleared of oil, grease, dirt, loose paint, mill scale or any other matter which would impair bond.
   d) All clips, hangers, supports, sleeves and other attachments to the fireproofing bases, as covered under other sections of the specifications, are to be placed in others prior to the application of the fireproofing material, where these attachments can be anticipated in advance.
   e) Ducts, piping or conduit or other suspended equipment that could interfere with the uniform application of the fireproofing material are to be positioned after the application of the sprayed fireproofing.
   f) Temperatures and enclosure conditions shall be as specified by the materials manufacturer.
   g) All patching and repairing of sprayed fireproofing, due to cutting by other trades, shall be performed under this section and paid for by the trade(s) that performed the cutting.
   h) The contractor shall cooperate in the coordination and scheduling of the work of this section to avoid delays in the progress.

6. CLEAN-UP
   After completion of fireproofing work, equipment shall be removed and all wall and floor areas cleaned of deposits of sprayed fireproofing materials.

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Yorkton
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P.O. Box 1040

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**Perlite only

W. R. GRACE & CO.

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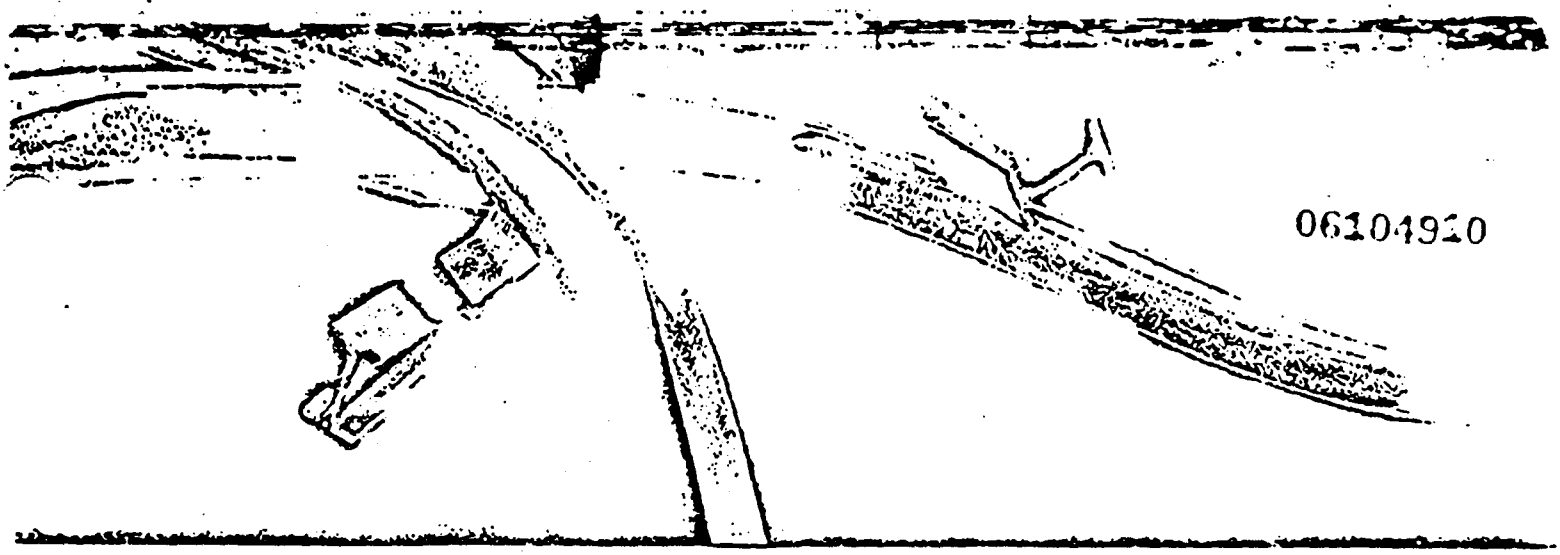
62 WHITTEMORE AVE.

CAMBRIDGE, MASS. 02140

Phone: (617) 876-1400

CONSTRUCTION PRODUCTS DIVISION

SWEET'S
1970



06104910

Before fire makes it too hot for steel, talk to Zonolite about the kind of fire insurance you spray on.

It's Zonolite® Mono-Kote, the compound that fireproofs steel and concrete. And does it so well that its fire-resistance ratings range up to 5 hours, depending on the structural system it's part of.

Mono-Kote comes ready to use. Just add water. And spray. It pumps easily—as high as 50 stories. Goes on fast. Delivers a bond strength of more than 500 pounds per square foot.

Other features? Indeed! Like zero erosion, after being tested in 100 m.p.h. winds for 87 hours. Result: no "dusting" in air-conditioning and ventilating systems. Also, its use permits reduction in the thickness of concrete floors. Cost? Very little.

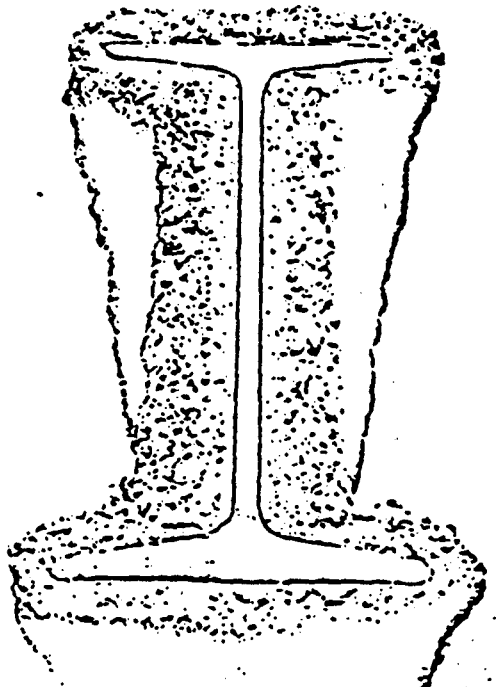
Want all the facts and figures from the Zonolite fireproofing experts? Say the word.

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W. R. GRACE & CO.
62 Whittemore Avenue
Cambridge, Mass. 02140

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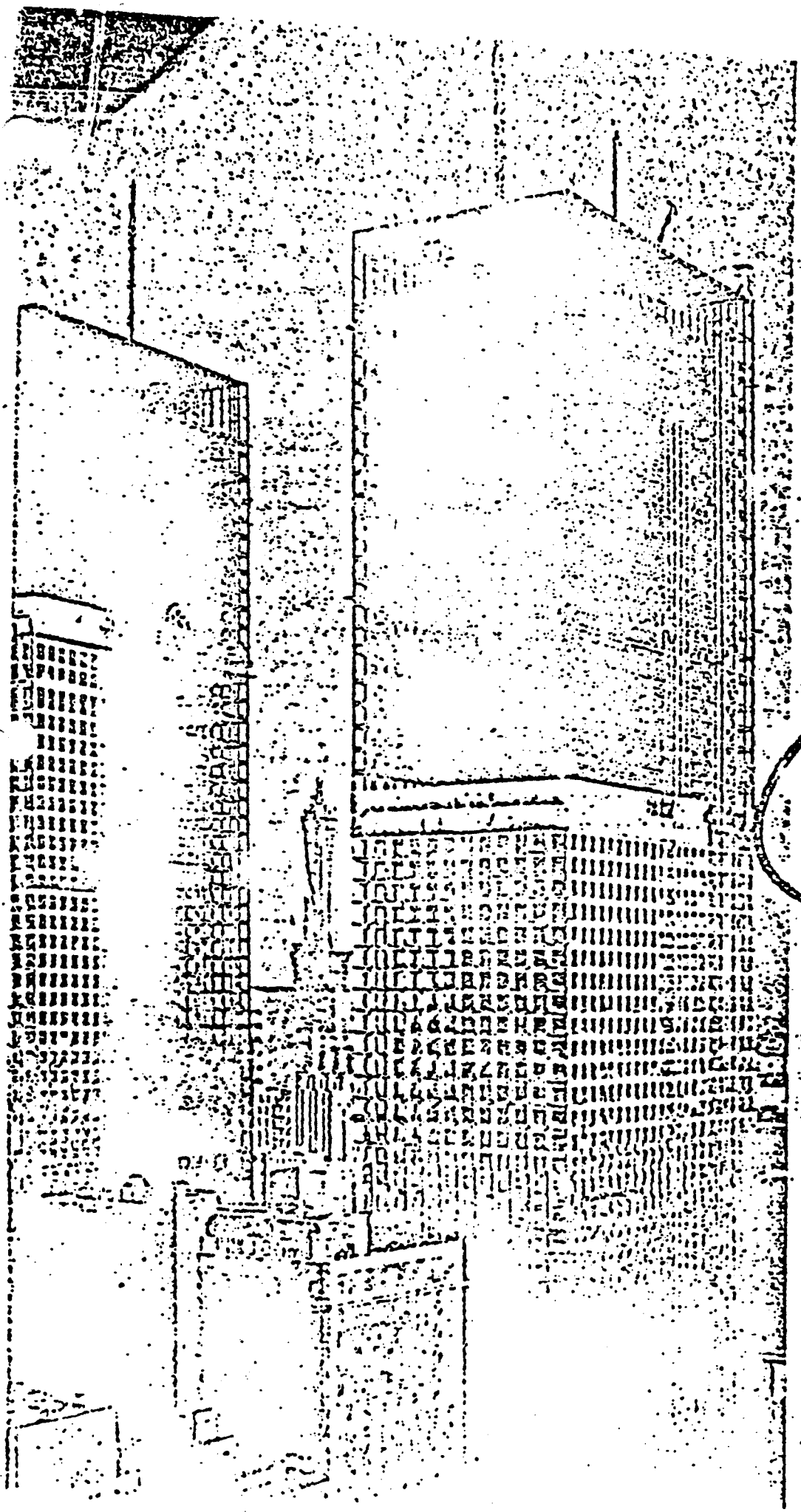


PLAINTIFF'S EXHIBIT

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Just Se... Grace



SINCE 1929

SprayDon

with 43 years experience in sprayed fiber

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- THERMAL INSULATION
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Atlantic Richfield Building, Richfi
Architect: A. C. Martin
General Contractor: McKee-Turn
Sprayon Contractor: Filosa Firep
Los Angeles