

PLAINTIFF'S
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PLAINTIFF'S
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WV-05703

SWEET'S CATALOG FILE

A File of Manufacturers' Catalogs designed for the use of Architects, Engineers, Contractors and others whose practice it is to select, specify or purchase building materials, equipment and allied services.

SWEET'S CATALOG SERVICE

DIVISION OF F. W. DODGE CORPORATION
119 WEST FORTIETH STREET, NEW YORK

PHILADELPHIA

SEE
SECTION
1



CATALOG
NO.
4

the United States of America

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WV-05703

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JOINTITE

CORK PRODUCTS

MUNDET CORK CORPORATION
BROOKLYN, N. Y.

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Mundet "Jointite" Bulletin Board

Catalogs of these products of Mundet Cork Corporation are filed in other sections of SWEET'S CATALOG FILE (ARCHITECTURAL)

MUNDET CORK CORPORATION

65 South 11th Street, Brooklyn, N. Y. • Insulation Factory, Hillside, N. J.

BRANCHES: ALBANY, N. Y.; ATLANTA, GA.; BOSTON, MASS.; CHICAGO, ILL.; CINCINNATI, OHIO; DALLAS, TEX.; DETROIT, MICH.; HOUSTON, TEX.; KANSAS CITY, MO.; LOS ANGELES, CAL.; MEMPHIS, TENN.; NEW ORLEANS, LA.; PHILADELPHIA, PA.; ST. LOUIS, MO.; SAN FRANCISCO, CAL.; SYRACUSE, N. Y.

CANADA: MUNDET CORK AND INSULATION, LTD., Montreal, Toronto, Winnipeg, Vancouver

GREAT BRITAIN: London, England, MUNDET CORK PRODUCTS, LTD.

PORTUGAL: Sinal, Messers et Cia

DISTRIBUTORS: BALTIMORE, MD., McCormick Asbestos Co.; BUFFALO, N. Y., Clinton Asbestos Co.; CHARLOTTE, N. C., Gen. A. White & Co.; CLEVELAND, OHIO, Standard Asbestos & Mfg. Co.; HARTFORD, CONN., The Hartford Cement Co.; MINNEAPOLIS, MINN., Asbestos Building Materials Co.; NASHVILLE, TENN., John Bouchard & Sons Co.; NORFOLK, VA., F. H. Gaskins Corp.; OKLAHOMA CITY, OKLA., Standard Roofing & Material Co.; PORTLAND, ORE., Pacific Asbestos & Supply Co.; RICHMOND, VA., Virginia Insulation Co.; SALT LAKE CITY, UTAH, Louis A. Roser; SEATTLE, WASH., Pioneer Sand & Gravel Co.; TULSA, OKLA., Standard Roofing & Material Co.; WEEKA, N. Y., George Weisenberger.



CORK ... its History

In the land contiguous to the Western Mediterranean and comprising parts of Spain, Portugal and Morocco, grows an evergreen known as the Cork Oak (*Quercus Suber*). This tree must survive a tremendous amount of heat since it grows in tropical and semi-tropical zones. Nature has provided for this by promoting a growth which covers the trunk and limbs of the tree and effectively insulates it against the intense heat. This growth (or bark) is the cork of commerce. At periodic intervals the trees are stripped of this bark, which is then processed, baled and shipped to manufacturing centers in Europe and the United States. Various manufacturing plants produce a multitudinous variety of cork products including cork insulation.

Cork has been used for many centuries. We find that it was fabricated by the ancients into shoe soles, floats of bottle stoppers. In the past fifty years the uses of cork have multiplied many times. This peculiar and versatile material is now employed in all of the manufacturing and process industries. It has even invaded the field of decorative art, and it may truly be regarded as a necessary concomitant of civilization.

WHY CORK IS AN INSULATOR

As explained above, Nature provided a covering that would protect the Cork Oak from the attack of tropical heat. This is accomplished by shaping a covering of relatively even thickness containing a multitude of minute air particles each hermetically sealed one from the other. Each particle of entrapped air is so small that it will not permit the setting up of air currents and in this way heat penetration is prevented. Further-

more, due to its granular structure, cork has no capillarity, while practically all other insulating materials are of a fibrous nature and have a high degree of capillarity.

Although primarily designed for use in the Refrigeration and Cold Storage Industries, Mundelet "Jointite" Cork Insulation has a wide range of applications, as text on the following pages will make clear.

THE MANUFACTURE OF CORKBOARD

The cork bark used for insulation is first ground up into particles or granules of from $\frac{1}{8}$ to $\frac{1}{4}$ in. in size. These are filled into moulds and hydraulically pressed to the required density. The moulds are then placed in an oven maintained at a relatively high temperature for a period of time dependent upon the thickness of insulation involved. The cork is kept under compression in the moulds throughout the baking

process. The heat liquefies the gum or rosin that is peculiar to this type of bark. This gum thoroughly binds the granules together and hermetically seals one from the other, producing a solid slab of cork board (still 100% pure cork). The rough slab is then subjected to a finishing process which cuts it to accurate size and sands its surfaces, completing the manufacture of commercial corkboard insulation.

ESSENTIALS OF GOOD INSULATION

The essentials of good insulation are low thermal conductivity; fire retardance; permanence; non-absorbence; sanitation; economy. Mundelet "Jointite" Corkboard incorporates all these qualities.

Mundelet Corkboard meets the U. S. Government Master Specification requirements in every respect. Its heat transmis-

sion is guaranteed not to exceed .30 B.T.U. per square foot per inch thickness per degree difference in temperature per hour when tested under Bureau of Standards conditions and methods. In actual cold storage practice the insulation value may be taken as about ten per cent better than the guaranteed figure.

CONDUCTIVITY CHART FOR CORKBOARD INSULATION



TABLE OF THICKNESSES RECOMMENDED TO BE USED FOR COLD STORAGE WORK AS INSULATION FOR VARIOUS TEMPERATURES

Range of temperature	Walls, in.	Ceilings, in.	Floor on ground, in.	Floor above ground, in.	Roofs, in.
Below 0° F.	8	8	7	5	9
0° to 10° F.	7	7	6	4	8
10° to 20° F.	6	6	5	4	7
20° to 30° F.	5	5	4	3	6
30° to 40° F.	4	4	3	3	5
40° to 50° F.	3	3	2	2	4
Above 50° F.	2	2	2	2	3

Users of
Mundelet

[2]

BAKERIES

Gordon Baking Co.
Ward Baking Co.
Kroger Grocery & Baking Co.

CANDY FACTORIES

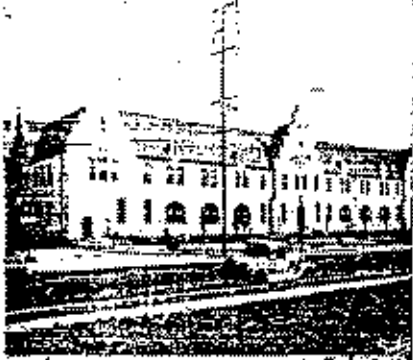
E. G. Shattuck Co. (Schraff's), New York, N. Y.
Park & Tifford, New York, N. Y.
Planters Nut & Chocolate Co., Suffolk, Va.



OUR FACILITIES

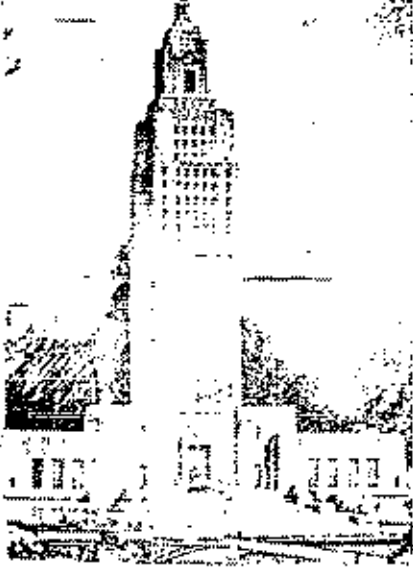
The name of Mundet was first identified with cork products in the year 1865. Today the Company ranks among the leaders of the industry.

The Company maintains two plants for the exclusive manufacture of insulation products. One is located in Portugal and the other in New Jersey (about ten miles from New York City). These plants are of about the same capacity and can produce a total of 60,000,000 to 70,000,000 ft. board measure of insulation a year. "Jointite" products are stocked in many of the large centers of the world. The Portuguese plant is adjacent to the Port of Lisbon from which regular sailings are to be had to any part of the world. The New Jersey plant at all times carries large stocks of finished products, as do all of the Branch Offices located in the principal cities of the United States and Canada. The Company's shipping facilities are unsurpassed, either by rail or water.



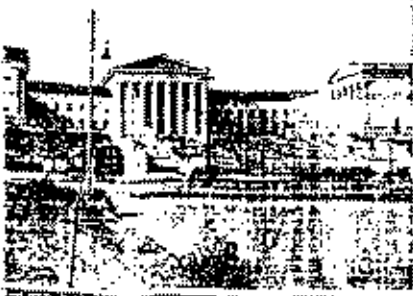
SALES AND SERVICE

The Company maintains branches in the principal cities of the United States and Canada for the convenience of its clients. Our branch offices are in charge of competent engineers who will gladly co-operate and furnish information pertinent to insulation work.



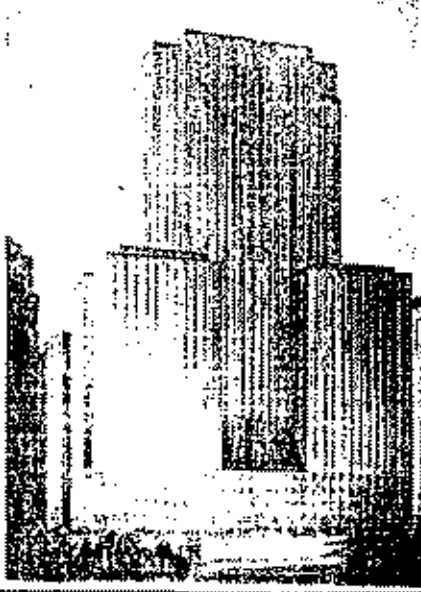
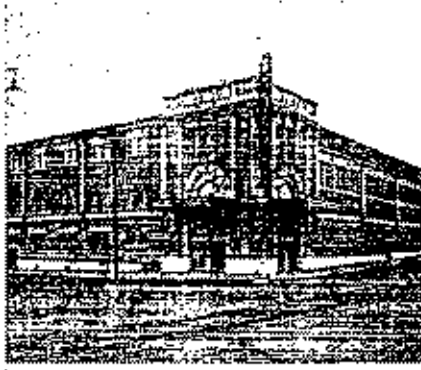
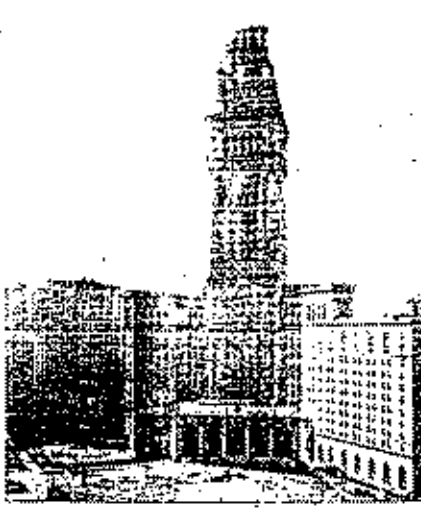
CONTRACTING

The Company maintains a well organized erecting force at each branch office fully capable of handling any erection contract involving its products. No contract is too small or too large.

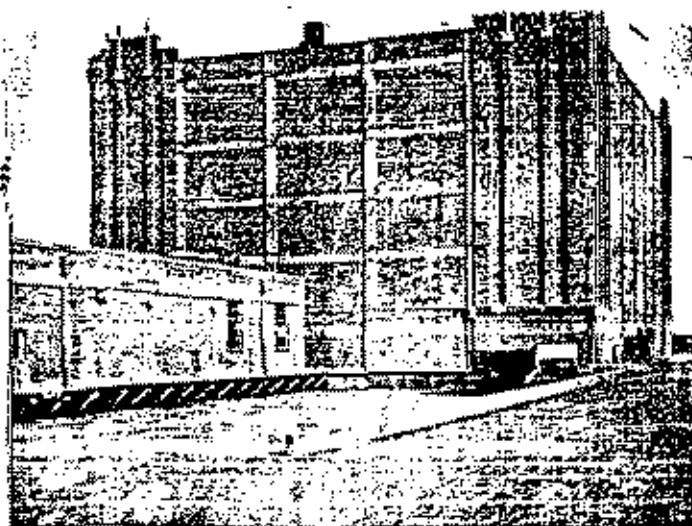


GUARANTEE

The Company unqualifiedly guarantees that its material and workmanship are of the best and agrees to make good, without cost to the client, any defect that may be chargeable to inferior material or workmanship.



*Users of
Mundet*



General for Cold Storage Walls . . .

Brick, Concrete, Hollow Tile,

Where First Course Is Erected in Cement Mortar

SPECIFICATION NO. 1 . . . The walls shall be insulated with . . . in. of "Jointite" Corkboard, applied in two courses of . . . in. each. The first course of corkboard shall be erected against the walls in a 1/2-in. bed of portland cement mortar.

Note (1): If walls are of concrete, specify that they shall be thoroughly hacked in order to provide a good bond.

The second course of corkboard shall then be applied against the first course in a heavy dip coat of hot asphalt and additionally secured to the first course with hard wood skewers of suitable length. All joints shall be broken relative to adjacent layers and to the preceding course. The exposed cork surfaces shall be finished with a 1/2-in. plaster finish applied in two coats; the first coat to be a rough or scratch coat and the second coat to be brought to a float (or trowel) finish and marked off in squares of approximately 4 ft. in order to minimize and direct shrinkage cracks.

Note (2): If mastic finish is desired in place of plaster finish, omit the last paragraph above and substitute as follows:

The exposed cork surface shall be finished with a 1/2-in. cold mastic finish consisting of a brush or spray application of Mundet Asphalt Emulsion, followed by a trowel application of Mundet Asphalt Emulsion mixed with asbestos and clean screened sand in the following proportions, viz., 20 gal. emulsion to 100 lb. of asbestos floats to 4 cu. ft. of sand. (This finish is black in color and may be painted if desired.)

Where First Course Is Erected in Hot Asphalt

SPECIFICATION NO. 2 . . . The walls shall first be given a single coat of portland cement plaster left under the float.

Note (1): If walls are of concrete, specify that they shall be thoroughly hacked in order to provide a good bond.

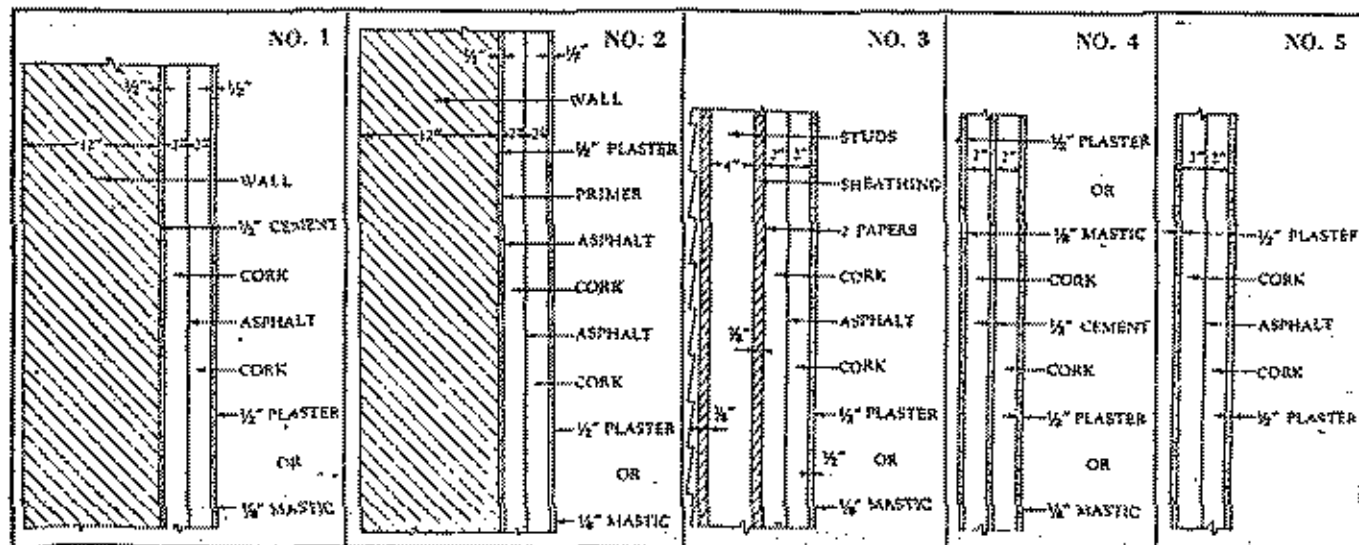
After the plaster coat has set, the walls shall be given two spray, or brush, coats of Mundet Asphalt Primer, following which the walls shall be insulated with . . . in. of "Jointite" Corkboard applied in two courses. The first course of corkboard shall be applied against the walls in a dip coat of hot asphalt. The second course and the finish shall be as stipulated in Specification No. 1.

Wood Frame Walls

SPECIFICATION NO. 3 . . . Two courses of waterproof insulation paper shall be securely tacked against the sheathed surfaces, after which the walls shall be insulated with . . . in. of "Jointite" Corkboard applied in two courses. The first course of corkboard shall be nailed dry to the wall with the galvanized wire nails made especially for this type of work. The second course of corkboard shall be applied against the first course in a heavy dip coat of hot asphalt, and additionally secured with hard wood skewers of suitable length. All joints shall be broken with respect to adjacent layers and to the preceding course. The finish shall be as provided in Specification No. 1.

Cork Partitions—Cement Mortar

SPECIFICATION NO. 4 . . . The partitions shall be of the solid cork and cement self-sustaining type, and shall be fabricated of two courses of . . . in. "Jointite" Corkboard. The first course of corkboard shall be erected against temporary studding and the second course shall be erected against the first in a 1/2-in. bed of portland cement mortar, and



*Users of
Mundet*

CLUBS

- [4] Chicago Woman's Club, Chicago, Ill.
Engineers Club, Boston, Mass.
Union League Club, New York, N. Y.

COLD STORAGE WAREHOUSES

Merchants Refrigerating Co., Jersey City, N. J.
Great Atlantic & Pacific Tea Co., Various Locations
Manhattan Refrigerating Co., New York, N. Y.

Specifications Insulation Floors

Wood Frame • Cork Partitions



Additionally secured with hardwood skewers of suitable length. All joints shall be broken relative to adjacent layers and to the preceding course. The exposed surfaces shall be finished as specified in Specification No. 1.

Cork Partitions—Hot Asphalt

SPECIFICATION NO. 5 . . . The partitions shall be of the solid cork and cement self-sustaining type, and shall be fabricated of two courses of . . . in. "Jointite" Corkboard. The first course of corkboard shall be erected against temporary studding and the second course shall be erected against the first in a dip coat of hot asphalt, and additionally secured with hard wood skewers of suitable length.

All joints shall be broken relative to adjacent layers and to the preceding course. The exposed cork surfaces shall be finished with $\frac{1}{2}$ in. of portland cement plaster mixed 1:2, applied in two coats; the first coat to be a rough or scratch coat and the second coat to be brought to a float (or trowel) finish and marked off in squares of approximately 4 ft. in order to minimize and direct shrinkage cracks.

Concrete Floors, Concrete Base

SPECIFICATION NO. 6 . . . The floor shall be insulated with . . . in. of "Jointite" Corkboard applied in two courses. The first course shall be laid down in a heavy mop coat of hot asphalt and the second course shall be laid upon the first in like manner, with all joints broken relative to the first course. The exposed top of the corkboard shall then receive a heavy mop coat of hot asphalt which shall thoroughly seal all joints.

A concrete wearing floor . . . in. thick shall be laid upon the corkboard. The first . . . in. shall be gravel or rock concrete

mixed . . . followed by a 1-in. cement top mixed 1:2 and floated and troweled to a smooth and even finish. The floor shall be pitched to floor drains.

Wood Floors, Concrete Base

SPECIFICATION NO. 7 . . . The floors shall be insulated with . . . in. of "Jointite" Corkboard in two layers as provided in Specification No. 6.

Over the first course of corkboard there shall be laid . . . 24-in. wood sleepers on 28-in. centers, all securely mopped in.

The exposed cork surface shall then receive a heavy mop coat of hot asphalt which shall thoroughly seal all joints.

A wearing floor of 2x. . . in. long leaf yellow pine shall then be applied, securely nailed to the sleepers provided in the top layer of corkboard.

Mastic Floors, Concrete Base

SPECIFICATION NO. 8 . . . The floor insulation shall be laid as in Specification No. 6.

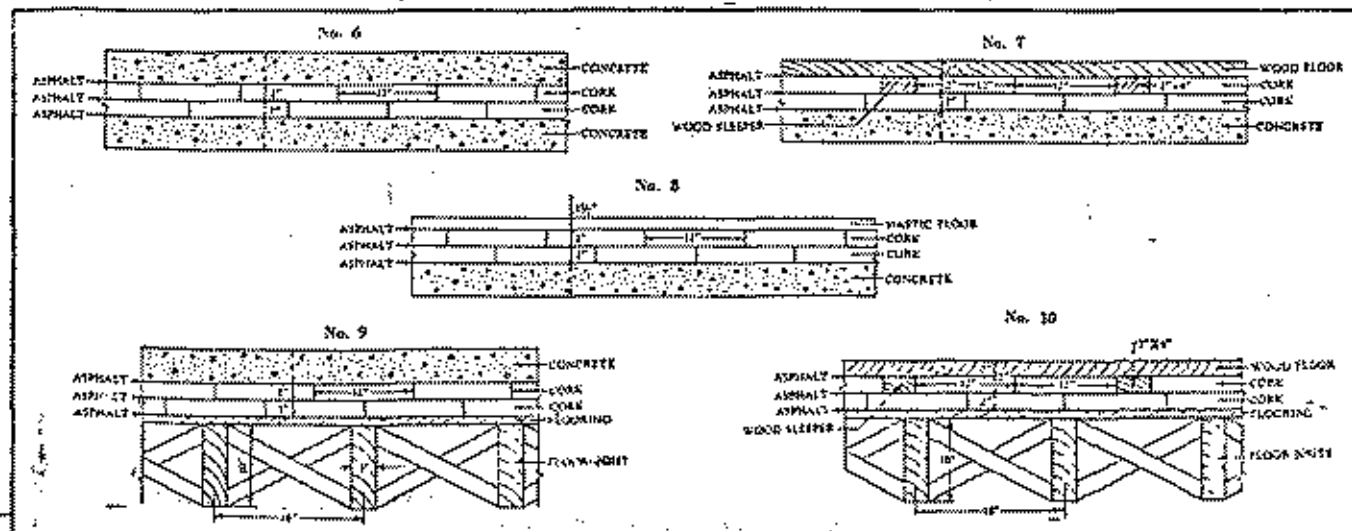
The finish floor shall consist of a 2-in. mastic wearing surface applied in two courses.

Concrete Floors, Wood Base

SPECIFICATION NO. 9 . . . The floor shall be insulated as in Specification No. 6.

Wood Floors, Wood Base

SPECIFICATION NO. 10 . . . The floors shall be insulated as in Specification No. 7.



COLLEGES

Yale University, New Haven, Conn.
Harvard University, Boston, Mass.
University of Pennsylvania, Philadelphia, Pa.

DAIRIES

Borden Farms Products Co., Various Locations
Sheffield Farms Co., Various Locations
Beatrice Creameries, Detroit, Mich.



General Insulation

Ceilings • •

Concrete

SPECIFICATION NO. 11 • • • The ceiling shall be insulated with ... in. of "Jointite" Corkboard applied in two courses. The ceiling areas shall first be thoroughly backed and pitted and shall then receive a tight scratch coat of portland cement mortar.

The first course of corkboard shall then be applied in a 1/2-in. bed of portland cement mortar and securely propped in place until the cement has set. The second course of corkboard shall then be applied against the first course in a heavy dip coat of

hot asphalt, and additionally secured with hardwood skewers of suitable length. All joints shall be broken relative to adjacent layers and to the preceding course.

The exposed cork surfaces shall be finished as provided in Specification No. 1.

Note: If plaster finish is desired it is recommended that No. 19-gauge galvanized wire mesh, having two meshes to the inch be securely stapled to the cork surfaces before plaster finish is applied.

Alternate

The ceiling shall be insulated with ... in. of "Jointite" Corkboard applied in two courses. The ceiling areas shall be stripped with 2x4-in. treated lumber spaced 12 in. or 18 in. or 24 in. apart and fastened to ceiling with galvanized expansion bolts not more than 5 ft. 0 in. on centers. The entire ceiling area shall then be given a spray coat of Mundet Asphalt Primer, following which the first course of corkboard shall be applied in a heavy dip coat of hot asphalt and securely toe nailed to 2x4-in. strips. Second course application same as specified in base specifications.

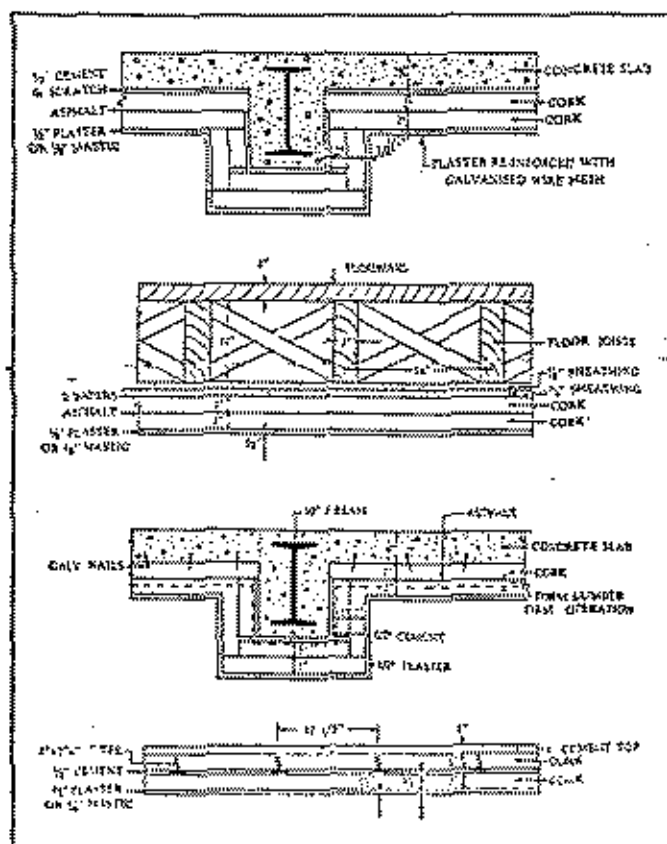
Ceilings, Wood

SPECIFICATION NO. 12 • • • The ceiling shall be insulated with ... in. of "Jointite" Corkboard in two courses over wood sheathing.

Two layers of 3/8-in. tongued and grooved sheathing shall be installed on the underside of ceiling joists with two layers of waterproof insulation paper between the sheathing courses, and two layers of waterproof insulation paper securely tacked to the underside of the sheathing. On the ceiling surface thus prepared shall be erected the first layer of corkboard, nailing each piece securely in place. The second course of corkboard shall then be applied against first course in a dip coat of hot asphalt and finished as provided in Specification No. 1.

Ceilings (New Buildings) Concrete

SPECIFICATION NO. 13 • • • The ceilings shall be insulated with ... in. of "Jointite" Corkboard applied in two courses. The general contractor will lower the forms



Users of
Mundet

SPECIFICATIONS (Cont'd)

Roofs



of the slab construction a distance sufficient to allow the first course of corkboard to be laid dry in the forms. There shall be at least six special galvanized nails placed in each sheet of corkboard laid in forms with the heads protruding not less than $\frac{1}{2}$ in. to act as a key in the concrete. After the forms are stripped the second course of corkboard and both courses of corkboard on the beams and girders shall be applied and finished as in Specification No. 11.

Ceilings, False T Iron

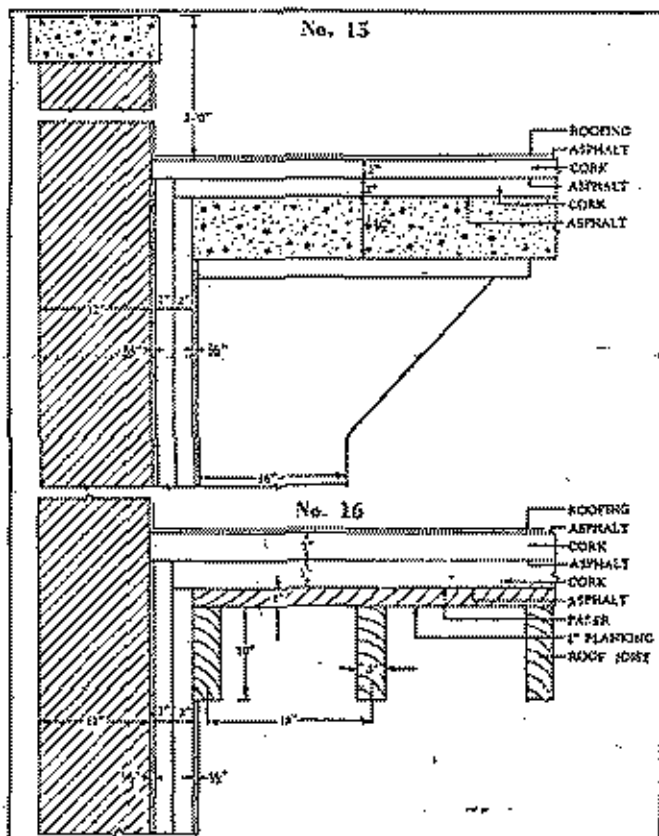
SPECIFICATION NO. 14 * * * The ceilings shall be insulated with in. of "Jointite" Corkboard applied in two courses. A framework consisting of 2x2x... in. tees spaced on 12 $\frac{1}{2}$ -in. centers, shall be erected upon 2x2-in. wood framing concealed in the cork wall insulation. The first course of corkboard shall be placed between the tee irons after all edges have been dipped in hot asphalt. The second course of corkboard shall be applied against the underside of the first course in a $\frac{1}{2}$ -in. bed of portland cement mortar, and additionally secured with hardwood skewers of suitable length. All joints in the second course shall be broken relative to adjacent layers and to the first course. The top exposed surface of the corkboard shall be finished with 1 in. of portland cement plaster left under the float. The underside of the insulation shall be finished as provided in Specification No. 1.

Concrete

SPECIFICATION NO. 15 * * * The roof slab shall be insulated with in. of "Jointite" Corkboard applied in two courses. The first course of corkboard shall be laid down on the concrete slab in a heavy mop coat of hot asphalt, and against it a second course of corkboard shall be applied in like manner. All joints shall be broken relative to adjacent layers and to the preceding course. The exposed cork surfaces are to remain uncoated and left ready for the roofing contractor to lay his roofing. The cork contractor and the roofing contractor shall co-operate with each other in order that all insulation laid in any one day will be protected without two-ply roofing.

Wood

SPECIFICATION NO. 16 * * * The roof shall be insulated with in. of "Jointite" Corkboard applied in two courses. Over the roof planking shall be laid one course of waterproof insulation paper with the seams lapped at least 3 in. and mopped in with hot asphalt. The cork insulation shall then be applied as in Specification No. 15.



HOSPITALS

Physicians and Surgeons Hospital, Wilmington, Del.
Columbus Hospital, Chicago, Ill.
U. S. Government Hospitals, Various Locations

Presbyterian Hospital, Newark, N. J.
New York State Hospitals, Various Locations
New York City Hospitals, New York, N. Y.

Column Insulation

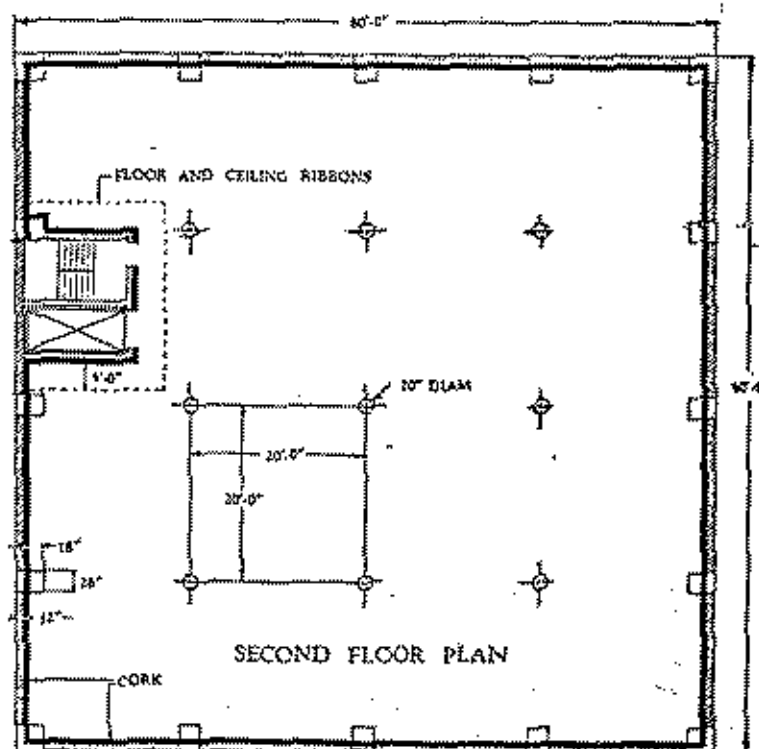
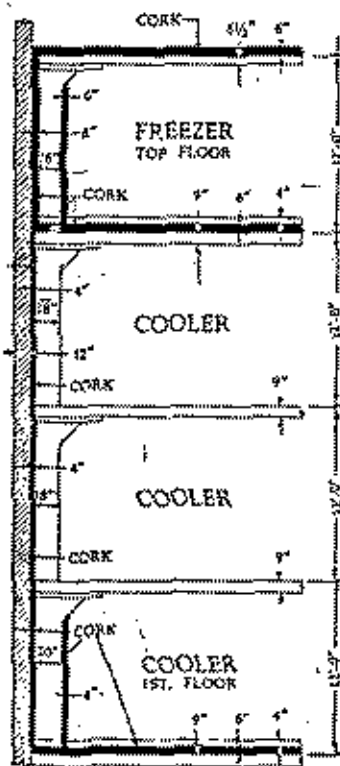
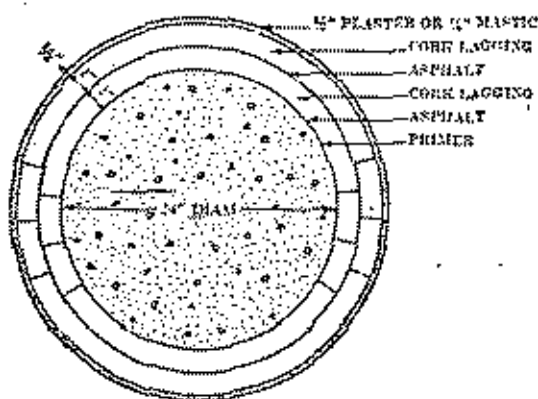
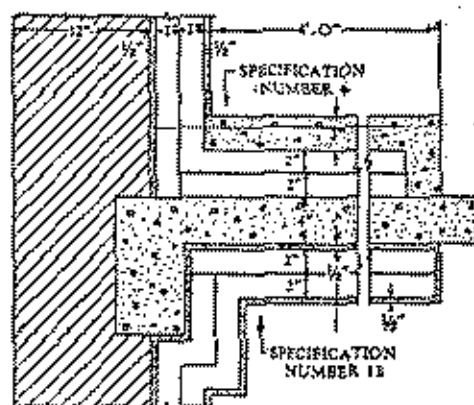
SPECIFICATION NO. 17 . . .

The circular columns shall be insulated with in. of "Jointite" Corkboard bevelled lagging, applied in two courses. The column surfaces shall receive a single coat of Mundet Primer, after which the first course of lagging shall be applied in a dip coat of hot asphalt. Each lag shall be securely locked to the adjacent lags with hard wood skewers of suitable length. The second course of lagging shall then be applied against the first course in a heavy dip coat of hot asphalt, and additionally secured to the first course with hard wood skewers of suitable length. The exposed cork surfaces shall be finished as in Specification No. 1.

LAP OR RIBBON INSULATION

Used where continuous insulation is not obtainable.

Ribbon insulation is the form shown on the accompanying sketch. It consists of insulation either on floor or ceiling which extends out to a limited distance only from the wall line. It is used where conditions make it impossible to provide continuous insulation. The ribbon insulation must be carried around beams and girders. For specifications, see notes on cut.



Typical Section and Plan of Building Showing Continuous Installation

Users of
Mundet

HOTELS

[8]

Hotel Park Central, New York, N. Y.
Hotel St. George, Brooklyn, N. Y.
Hotel Majestic, Philadelphia, Pa.

Bryn Mawr Beach Hotel, Chicago, Ill.
Kenmore Hotel, Boston, Mass.
Jung Hotel, New Orleans, La.

Coil Bunker Construction

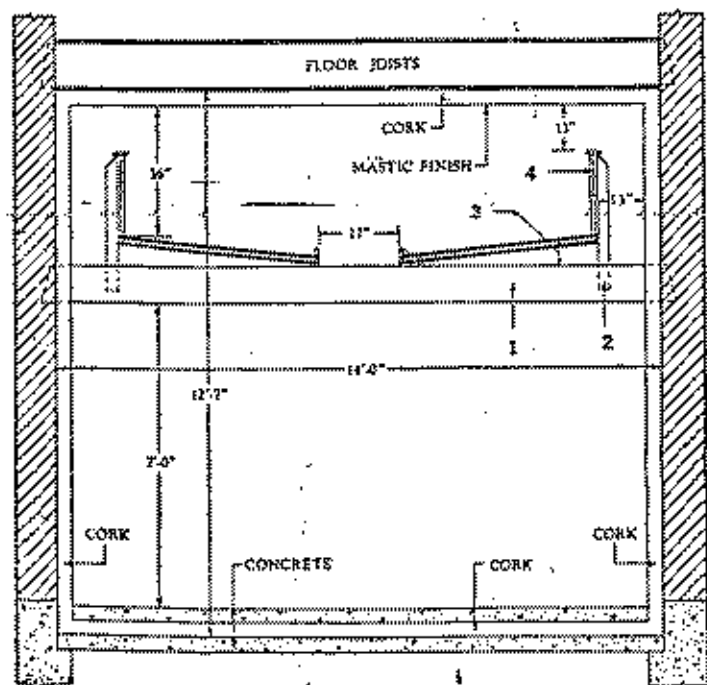
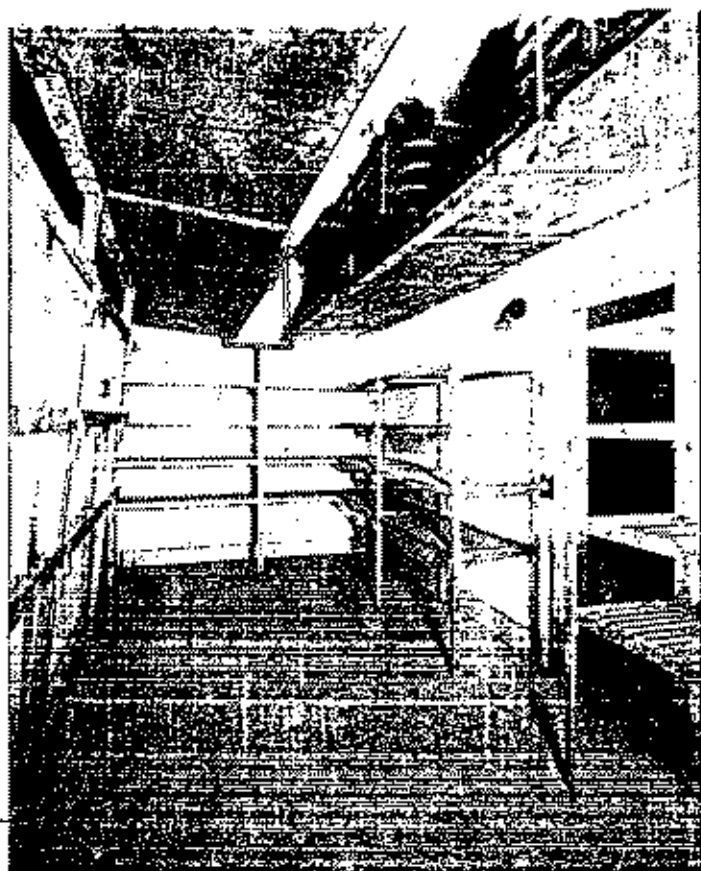
SPECIFICATION NO. 18 . . .

A coil loft or bunker shall be constructed, supported on . . . x . . . in. timbers spaced 20 in. apart (Item 1), which shall be suitably supported in walls.

Wood cleats 2x4 in. (Item 2), shall then be securely bolted to the sides of the timbers and will act as supports for the warm air baffles (Item 4).

The top of the timbers shall then be given the correct slope by nailing tapered strips, which shall be the width of the timber and shall vary from 3 in. high at the outside end to 1 in. at the inside. These tapered strips shall then be sheathed with $\frac{7}{8}$ -in. tongued and grooved sheathing of spruce or cypress, over which shall be laid two courses of waterproof insulation paper, followed by a single course of 2-in. corkboard, laid down in and coated with hot asphalt.

In the corkboard shall be buried 2x2-in. wood sleepers on 26-in. centers, which will act as nailing strips for the $\frac{7}{8}$ -in. tongued and grooved sheathing



Section Showing Coil Bunker Construction

which shall be placed over the corkboard together with two layers of waterproof insulation paper, all securely nailed to the sleepers (Item 3). The top surface of bunker floor shall then be covered with No. 24-gauge galvanized iron (or copper) lining flashed up on the warm air baffles a distance of 12 in., and provided at the low point with a scupper for drainage connection. The baffles shall be constructed of two courses of $\frac{7}{8}$ -in. tongued and grooved sheathing with two layers of waterproof insulation paper between them, all securely nailed to the wooden cleats mentioned above (Item 4).

The edges of the cold air duct shall be formed with 2x8-in. timbers securely fastened to the bunker timbers. The metal lining of the bunker shall extend over these timbers and shall be lapped vertically downward at least 2 in.

Note: For rooms having less than 8 ft. inside clear width, it is customary to use a single bunker pan. In rooms of greater than 8-ft. width the double bunker pan illustrated should be used. It is customary to make the total duct widths equal to about 30% of total width of room.

ICE CREAM PLANTS

Breyers Ice Cream Co., Various Locations
F. G. Shattuck Co. (Schrafft's), New York, N. Y.
Eckman Pie Corp., Brooklyn, N. Y.

Anheuser-Busch Co., Various Locations
Wieland Ice Cream Co., Chicago, Ill.
Good Humor Ice Cream Co., Detroit, Mich.

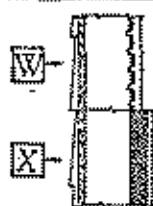
Typical Construction Details

Below are illustrated certain commonly used building sections, with and without insulation, together with tables showing the heat transmission through them expressed in B.t.u. per-hour, per square foot, per degree difference in temperature. The figures given for uninsulated construction have been taken from information contained in the 1930 Guide of the American Society of Heating and Ventilating Engineers. Savings in heat loss by the use of Mundet "Joistite" Corkboard are apparent.

The cuts are representative of methods of construction in common use and the data given will apply regardless of size or class of work. Should there be a type not illustrated upon which information is desired, a communication addressed to any of our offices will receive immediate attention and the specific information will be furnished.

On thickness of cork insulation greater than 3 in., figures are based on two-layer construction, using hot asphalt between the layers of cork.

SPECIFICATIONS



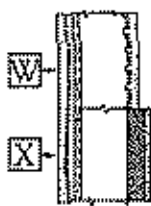
"W" beveled siding, waterproof paper, sheathing, studding, lath and plaster.

"X" beveled siding, waterproof paper, sheathing, studding, corkboard, plaster.

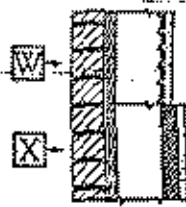
Not insulated, W	X, insulated with corkboard, in.				
	1/2	2	3	4	6
U	.117	.093	.073	.058	.049

"W" stucco on metal lath, furring, waterproof paper, sheathing, studding, lath and plaster.

"X" stucco on metal lath, furring, waterproof paper, sheathing, studding, corkboard, plaster.



Not insulated, W	X, insulated with corkboard, in.				
	1/2	2	3	4	6
U	.119	.125	.102	.076	.059



"W" brick veneer, waterproof paper, sheathing, studding, lath and plaster.

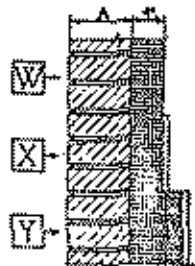
"X" brick veneer, waterproof insulation paper, sheathing, studding, corkboard, plaster.

Not insulated, W	X, insulated with corkboard, in.				
	1/2	2	3	4	6
U	.158	.114	.095	.071	.057

"W" brick, tile.

"X" brick, tile, plaster.

"Y" brick, tile, portland cement backing, corkboard, plaster.



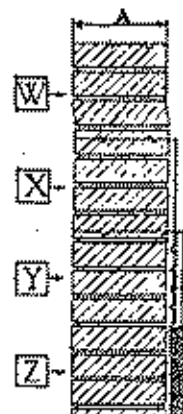
Thickness, A, in.	Not insulated		Y, insulated with corkboard, in.				
	W	X	1/2	2	3	4	6
4	.157	.143	.110	.091	.071	.054	.049
8	.205	.197	.101	.080	.067	.052	.048
12	.246	.185	.095	.084	.066	.051	.048

"W" 4-in. face brick and common brick.

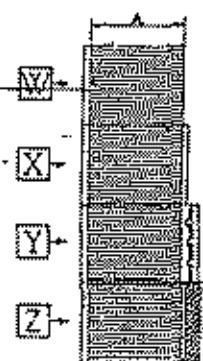
"X" brick, plaster.

"Y" brick, furring, lath and plaster.

"Z" brick, portland cement mortar backing, corkboard, plaster.



Thickness, A, in.	Not insulated			Z, insulated with corkboard, in.				
	W	X	Y	1/2	2	3	4	6
4	.585	.556	.261	.177	.106	.079	.059	.047
8	.595	.577	.276	.115	.098	.074	.056	.040
12	.638	.597	.284	.109	.090	.069	.053	.039
16	.690	.576	.283	.097	.081	.064	.050	.037
24	.767	.548	.276	.086	.074	.050	.047	.036



"W" stucco, hollow tile.

"X" stucco, hollow tile, plaster.

"Y" stucco, hollow tile, furring, lath and plaster.

"Z" stucco, hollow tile, portland cement backing, corkboard, plaster.

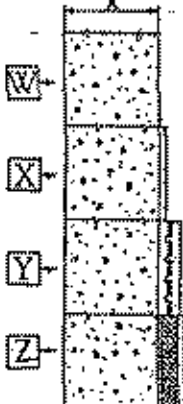
Thickness, A, in.	Not insulated			Z, insulated with corkboard, in.				
	W	X	Y	1/2	2	3	4	6
4	.515	.463	.411	.132	.113	.082	.061	.043
8	.519	.384	.346	.134	.101	.080	.059	.042
12	.517	.366	.328	.119	.090	.074	.052	.041
16	.504	.385	.321	.117	.093	.073	.058	.040
24	.541	.379	.316	.106	.090	.069	.053	.039

"W" concrete—1:3:5 mix.

"X" concrete, plaster.

"Y" concrete, furring, lath and plaster.

"Z" concrete, portland cement mortar backing, corkboard, plaster.



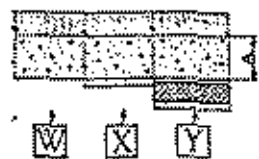
Thickness, A, in.	Not insulated			Z, insulated with corkboard, in.				
	W	X	Y	1/2	2	3	4	6
4	.611	.573	.367	.186	.120	.083	.062	.044
8	.581	.518	.349	.142	.110	.084	.062	.043
12	.512	.481	.314	.138	.111	.087	.061	.043
16	.485	.476	.297	.134	.110	.081	.060	.042
24	.411	.478	.273	.131	.106	.079	.059	.042
32	.441	.470	.271	.122	.102	.076	.057	.041
48	.510	.494	.278	.120	.099	.075	.057	.041
72	.594	.477	.276	.116	.097	.073	.056	.040

SPECIFICATIONS

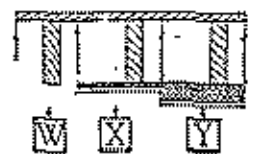
"W" finished (2-in.) concrete floor, reinforced concrete slab.

"X" finished floor, reinforced concrete slab, plaster finish.

"Y" finished concrete floor, reinforced concrete slab, portland cement mortar backing, corkboard, plaster.



Thickness A, in.	Not Insulated		Y, insulated with corkboard, in.				
	W	X	1 1/2	2	3	4	6
4	.461	.419	.135	.130	.081	.060	.042
5	.438	.400	.133	.109	.081	.060	.042
6	.417	.380	.131	.107	.080	.059	.042
7	.392	.363	.129	.106	.079	.059	.042
8	.378	.348	.127	.105	.079	.059	.042
10	.345	.327	.123	.103	.077	.058	.041



"W" single wood floor joists.

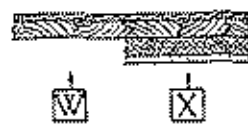
"X" single wood floor joists, lath and plaster.

"Y" single wood floor, corkboard, plaster.

Not insulated		Y, insulated with corkboard, in.					
W	X	1 1/2	2	3	4	6	
.440	.372	.119	.100	.075	.067	.041	

"W" finished wood floor (1 in.), mill constructed plank floor.

"X" finished wood floor, mill constructed plank floor, corkboard, plaster.

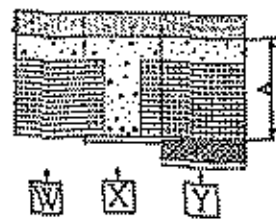


Not Insulated W	X, insulated with corkboard, in.					
	1 1/2	2	3	4	6	
.333	.108	.092	.070	.053	.039	

"W" finished (2-in.) concrete floor, reinforced concrete joist and tile slab.

"X" finished floor, reinforced concrete joist and tile slab, plaster.

"Y" finished floor, reinforced concrete joist and tile slab, portland cement mortar backing, corkboard, plaster.

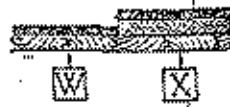


Thickness A, in.	Not Insulated		Y, insulated with corkboard, in.				
	W	X	1 1/2	2	3	4	6
3 1/2	.621	.550	.150	.119	.083	.062	.043
4	.430	.359	.133	.111	.084	.062	.043
10 1/2	.392	.371	.132	.106	.081	.060	.042
13	.370	.299	.129	.104	.079	.059	.042
15 1/2	.371	.280	.114	.096	.074	.057	.041

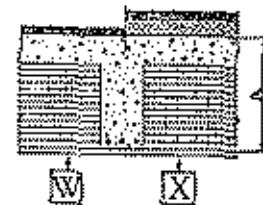


"W" standard built-up roofing, mill construction plank roof.

"X" standard built-up roofing, corkboard, mill construction plank roof.



Not Insulated W	X, insulated with corkboard, in.				
	1 1/2	2	3	4	6
.345	.126	.104	.087	.058	.041



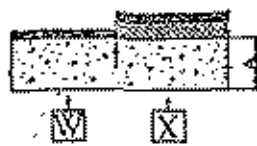
"W" standard built-up roofing, reinforced concrete joists and tile slab, plaster.

"X" standard built-up roofing, corkboard, reinforced concrete joists and tile slab, plaster.

Thickness A, in.	Not Insulated W	X, insulated with corkboard, in.				
		1 1/2	2	3	4	6
5 1/2	.575	.143	.114	.084	.062	.043
8	.496	.138	.113	.082	.061	.043
10 1/2	.470	.141	.110	.081	.060	.042
13	.381	.130	.107	.080	.059	.042

"W" standard built-up roofing, reinforced concrete slab.

"X" standard built-up roofing, corkboard, reinforced concrete slab.



Thickness A, in.	Not Insulated W	X, insulated with corkboard, in.				
		1 1/2	2	3	4	6
2	.658	.153	.122	.087	.063	.043
3	.610	.151	.120	.086	.063	.044
4	.598	.148	.119	.085	.062	.041
5	.542	.145	.117	.084	.062	.043
6	.500	.143	.115	.083	.061	.043
7	.472	.140	.113	.082	.061	.043
8	.447	.138	.112	.082	.060	.043

"Jointite" Moulded Cork Pipe Covering

All the insulating qualities of cork hereinbefore explained for cold storage, and its resistance to heat transmission generally, apply equally to its value as insulation for cold piping. It affords a most efficient and permanent means for protecting cold water, brine, and ammonia pipe lines and fittings.

"Jointite" Moulded Cork Pipe Covering is made of pure granulated cork compressed and moulded in forms and baked as described for corkboard. Following the baking process each piece of pipe covering is covered all over with a mineral rubber finish which prevents damage from moisture or frost.

Various moulded shapes are made both for pipe and fittings so that all parts of the pipe lines may be neatly and adequately covered.

Thickness		Clear space between pipes, in.	Clear space between pipes and walls, etc., in.
Extra	Screwed fittings under 6 in. Screwed fittings over 6 in. and flanged fittings	8	6
Special	Screwed fittings under 6 in. Screwed fittings over 6 in. and flanged fittings	14	8
Thick	Screwed fittings under 6 in. Screwed fittings over 6 in. and flanged fittings	10	8
Ice water	Screwed fittings under 6 in. Screwed fittings over 6 in. and flanged fittings	12	12
Thick	Screwed fittings under 6 in. Screwed fittings over 6 in. and flanged fittings	6	4
		10	5

SPECIFICATIONS

Used for 75% of all Pipe Covering

SPECIFICATION A • • • Pipe—After the pipe lines have been tested and approved, they shall be insulated with "Jointite" [(1), (2) or (3)] Cork Pipe Covering. All contact joints shall be sealed with Munder Waterproof Cement. All contact joints shall be butted closely and firmly together and secured with copper clad steel wire, spaced at intervals of not more than 6 in.

Fittings—The fittings shall be insulated with "Jointite" Moulded Cork Fitting Covers of a thickness to match the above pipe covering. All contact joints shall be sealed with Munder Waterproof Cement. All joints shall be butted closely and firmly together and secured with not less than four copper clad steel wires. On all flanged fittings and on all screwed fittings larger than 6 in., not less than six wires shall be used.

Voids—All spaces between fittings and fitting covers shall be filled with Munder Fitting Filler.

Seams—All seams and chipped edges in the fitting covers and pipe covering shall be filled with Munder Seam Filler and the surface made smooth.

Finish—The entire outer surface of the insulation shall receive one coat of Munder Finish Paint.

Hangers—Pipe Lines shall be supported, in every case, outside of the covering and shall be protected by carefully fitted metal shields extending 4 in. on each side of the hanger. The shield shall embrace the entire lower semicircle.

Spacing—Minimum spacing between pipes and adjacent surfaces shall be as given in the table at the top of this column.

Moist Air Conditions or Outdoor Use

SPECIFICATION B • • • Pipe, Fittings, Voids, Seams—Note: Specifications under these headings same as Specification A.

Roofing—After the seams have been filled, there shall be applied ... layers of ... ply smooth surfaced roofing. Each joint shall be lapped not less than 2 in. The laps shall be sealed

with asphalt paint and secured with staples or copper clad steel wire. All laps shall be laid in such a manner as to form a watershed.

Finish, Hangers, Spacing—Note: Specifications under these headings same as Specification A.

Decorative Canvas or Paint Finish

SPECIFICATION C • • • Pipe, Fittings, Voids, Seams—Note: Specifications under these headings same as Specification A.

Canvas—After the seams have been filled, the pipe covering shall be wrapped with No. 8 Rosin Sized Paper, and the fittings shall be given a coat of asbestos cement, troweled on, and of sufficient thickness to give a smooth base for canvas. Over the pipe and fittings, a jacket of 3-oz. canvas shall be neatly sewn, using not less than three stitches to the inch. All seams shall be located along the line of minimum visibility.

Finish—The canvas jacket shall be sized and painted with two coats of lead and oil paint.

Hangers, Spacing—Specification under this heading, same as Specification A.

Low Temperature Piping

SPECIFICATION D • • • Pipe, Fittings, Voids, Seams—Specifications under these headings same as Specification A.

Membrane Jacket—Over the fittings there shall be applied a layer of mineral rubber cloth, lapped not less than 2 in. and sealed with asphalt paint. Starting with a 2-in. lap upon the fittings, the straight pipe shall be wrapped spirally with a layer of rubberized adhesive membrane tape lapped not less than 1 in.

Finish—Finish to be either as in Specification A or Specification C.

Hangers, Spacing—Specifications under this heading same as Specification A.

Users of
Munder

[12]

ICE PLANTS

Knickbohrer Ice Co., New York, N. Y.
Boston Ice Co., Boston, Mass.
City Ice & Fuel Co., St. Louis, Mo.

OFFICE BUILDINGS

New York Life Building, New York, N. Y.
Provident Mutual Life Ins. Building, Philadelphia, Pa.
Riser Building, San Francisco, Cal.

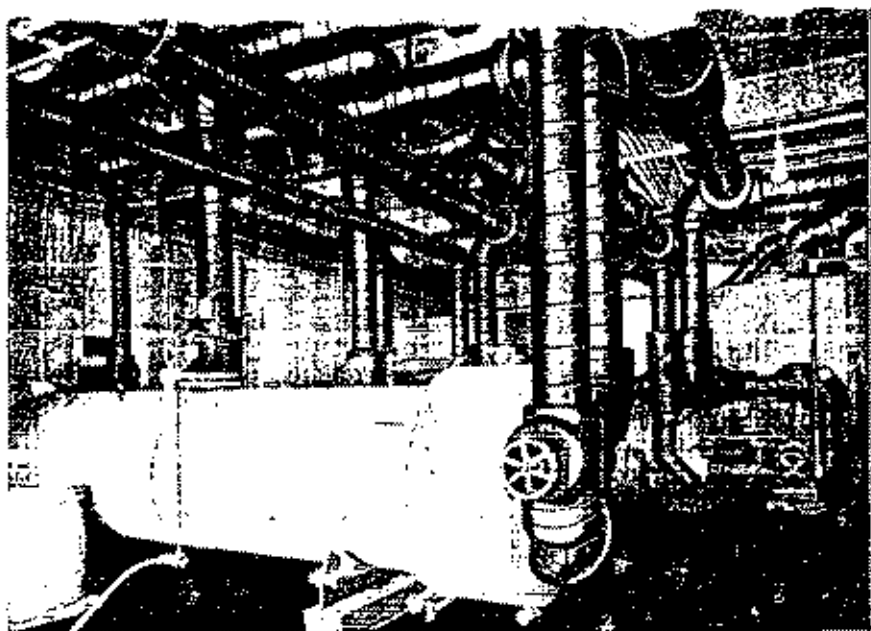
"Jointite" Cork Lagging

We manufacture beveled cork lagging and discs for the insulation of cylindrical tanks and coolers. The lagging is cut to order to any desired radius. If desired, the lagging can be furnished with a $\frac{1}{8}$ -in. mastic coating, ironed in at the factory. Shipment can be made within 24 hours after the order is received by our factory.

SUGGESTED THICKNESS

Note: The numbered items shown below are for covering of various standard thicknesses and for purposes as indicated. Reference will be made to this list in specification text.

- 2 in. of lagging (1) Above 40° F.
3 in. of lagging (2) Above 25° F. and below 40° F.
(3) Above 10° F. and below 25° F. 4 in. of lagging Applied in
(4) Below 10° F. 6 in. of lagging two courses



SPECIFICATIONS

SPECIFICATION E . . .

Note: This specification is usually used in conjunction with Specification A.

Lagging—(1) Tank Surfaces—After the cooler or tank has been tested and approved, the body of the tank shall be insulated with [see items (1), (2), (3) and (4)] . . . in. of "Jointite" Beveled Cork Lagging, applied in . . . courses. The first course shall be applied against the tank (with or without mineral rubber finish on the inside), with all contact joints firmly and securely butted together and sealed with Mundet Waterproof Cement. The lagging shall be further secured with copperclad steel wire spaced at intervals of not more than 6 in. (On tanks larger than 20" in diameter—outside measurement of cork—the lagging may be secured with No. 20-gauge galvanized spring steel bands $\frac{3}{4}$ " wide applied with special flush type clips on 9" centers). The second course of lagging shall then be applied against the first course in the same manner as above with all joints in the lagging broken with respect to the first.

(2) Flanges—The flanges shall be insulated in the same manner as the tank surfaces. The flange lagging shall lap upon the body lagging for 12 in. and shall project beyond the outermost portion of the head, a distance equal to the thickness of the tank insulation.

Discs—The heads shall be insulated with "Jointite" Corkboard Discs of the same total thickness as the tank insulation (with or without mineral rubber finish on the inside ironed on at the factory). The discs shall be applied directly against the head of the tank and supported by the flange lagging.

Voids—Any spaces between the lagging and the tank body shall be filled with Mundet Fitting Filler. The spaces between the bolts and flanges shall be filled with Mundet Fitting Filler. The spaces between the heads

and the flanges shall be filled with fine regranulated cork.

Finish—The entire outer surface of the insulation shall have a mineral rubber finish ironed on at the factory. After the insulation is completed all seams and chipped edges shall be filled with Mundet Seam Filler.

Painting—The entire outer surface shall receive one coat of Mundet Finish Paint.

SPECIFICATION F . . .

Note: This specification is often used in conjunction with Specification C.

Lagging, Discs, Voids, Finish—*Note:* Specifications under these headings same as Specification E.

Canvas—After the seams have been filled, the outer surface of the tank shall be covered with a layer of No. 8 Rosin Sized Paper. Over the paper shall be sewn a jacket of 8-oz. canvas. All seams shall be of the invisible type and shall have not less than three stitches to the inch.

Painting—The canvas shall be sized and painted with two coats of lead and oil paint.

SPECIFICATION G . . .

Note: This specification is very commonly used where a neat appearance, plus the ability to withstand a certain amount of rough usage is desired.

Lagging, Discs, Voids, Finish—Specifications under these headings same as Specification E.

Plaster—After the seams have been filled, the outer surface of the insulation shall be covered with a layer of 1-in. hexagonal mesh galvanized wire, securely stapled to the insulation. Over the wire shall be applied two coats of portland and asbestos cement plaster. The first coat shall be a rough or scratch coat; the second coat shall be troweled to a smooth and even finish.

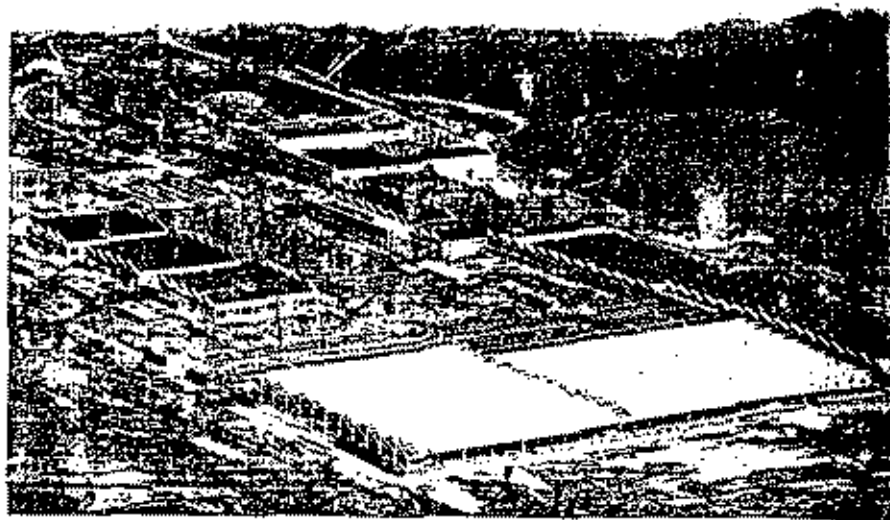
Painting—Optional.

INDUSTRIAL PLANTS

Public Service Gas & Electric Co., Jersey City, N. J.
Procter & Gamble Co.
DuPont Viscoid Co., Arlington, N. J.

Bethlehem Steel Co., Bethlehem, Pa.
Buick Motor Co., Flint, Mich.
American Enka Corp., Asheville, N. C.

Roof Insulation



To Prevent Condensation •

It is generally recognized today that correct building design must include insulation. The heat transmitted from uninsulated roofs in the winter results in a needless loss, the cost of which comes to a staggering total. Furthermore, the annoying and frequently expensive problem of ceiling condensation may be easily overcome.

In the summer, these same roofs absorb a tremendous amount of heat and deliver it to the rooms below, thus causing discomfort to, and impairing the efficiency of, people who are working in these areas. In certain commercial plants where the humidity and often the temperature must be governed at a high point, due to the processes of manufacture, an uninsulated roof will inevitably chill the air in its vicinity during the winter months to the point where some of its moisture condenses and forms what is commonly known as ceiling "sweat." The moisture drops to the floor, producing a most annoying condition to people who are working in the room and often causing damage to property, since it will drop upon any materials and machinery that may be underneath. The loss due to condensation must be considered separately from the direct loss due to heat leakage through the roof, the latter being present in all uninsulated construction while the former appears only when the humidity is relatively high or when the difference in temperature between the inside of the roof and the room is of considerable magnitude.

Numerous industries are in the position of, for example, textile mills, which have, as one of the prerequisites for proper manufacturing, a high degree of relative humidity. Many textile mills are located in New England, and in winter are operating with a great variation between the inside and outside temperatures of their buildings. Unless these buildings are insulated, the walls and roofs become very much colder, on the inside, than the surrounding air. This cold is transmitted to the adjacent air, which reaches the point of total saturation (dewpoint), and deposits its moisture upon the cold surfaces, from which come the drip. The resultant losses may be grouped as follows:

- (1) Direct losses.
 - (a) Heat transmitted through roof and walls.
 - (b) Damage to goods in process of manufacture.
 - (c) Decreased efficiency of labor.
- (2) Indirect losses.
 - (a) Damage to machinery.

(b) Deterioration of buildings, particularly of wooden construction.

(c) Lowered morale of labor due to unpleasant working conditions.

Unfortunately, it is only recently that industry has begun to subject its inherited losses to a careful scrutiny. In the past, ceiling condensation was regarded as a necessary evil, and an inevitable concomitant of high relative humidity. Advanced engineering practice in new buildings, however, has demonstrated its worth to the point where manufacturers have begun to realize that their old equipment cannot compete with new equipment unless it is brought up to date. However, the tendency to maintain a given status quo, plus the inhibition against spending money upon old equipment, has produced a considerable inertia. It is for this reason that all roofs are not insulated, although there have been instances without number where cork insulation has been installed in an existing plant and has paid for itself within a few years in the single item of coal required for heating.

When bringing to the attention of manufacturers the need for cork insulation in buildings, the greater stress has been laid upon the resultant saving in fuel. Today, however, industrial executives in ever increasing numbers are realizing that a most important factor in their problem of keeping costs at a minimum is the attitude of their labor. A worker is never efficient when he is uncomfortable, and therefore the use of insulation, while it may be considered as an intangible benefit from this angle, is nevertheless of vital import.

The other factors that go to make up the losses in uninsulated construction depend entirely upon individual conditions, and it is difficult to evaluate them in general terms, but it is reasonable to conclude that they are present in all cases to a greater or less degree and must eventually appear in the costs of manufacture.

Mention was made, in the foregoing text, of the losses caused by condensation in the textile industry; but it must not be assumed that this industry stands alone. Below are listed a number of types of buildings that are prone to condensation troubles.

Bakeries	Power houses
Creameries	Swimming pools
Laundries	Textile mills—cotton, wool and silk
Lumber drying rooms and kilns	Tobacco factories
Packing houses	Turkish baths
Killing rooms	Twine mills
Paper mills	

OIL REFINERIES AND PLANTS

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Crow Levick Co., Philadelphia, Pa.
Champlin Refinery Co., Enid, Okla.
Sinclair Oil Co., Tulsa, Okla.

Mid-Continental Oil Co., Tulsa, Okla.
Indiana Refining Co., Indianapolis, Ind.
Standard Oil Co. of California, Los Angeles, Cal.

Users of
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Thickness of Corkboard Needed

It has already been shown that cork is the ideal insulation for this work. The next important thing to determine is the thickness of corkboard that must be used.

There is no rule of thumb by which it is possible to determine what thickness of cork insulation is required for any given roof. The thickness of insulation is an exact function of the humidity present, the nature of the wall or roof construction, its own co-efficient of heat transmission, and the maximum temperature difference on the two sides of the building construction. In order to facilitate the determination of the correct thickness of corkboard insulation for roofs, a special chart has been included in this section (see page 17) upon which it is possible to read directly the permissible heat loss for any given set of conditions. Upon page 16 will be found a table showing the heat loss of all common types of roof construction. Under each type is shown the heat loss of that construction with various thicknesses of "Jointite" Corkboard Insulation. Typical cases are also shown graphically in illustrations on page 11.

The easiest way of demonstrating the use of the chart, table and illustrations will be to show the working of an actual case. Following is a typical problem: A manufacturing plant is equipped with a 3-in. yellow pine roof and standard $\frac{3}{8}$ -in. built-up roofing. The inside temperature (dry bulb) at the ceiling is 70° F., the relative humidity is 80%, and the lowest temperature during the winter is minus 10° F.

Locate the line of 70° upon the room temperature scale at the top of the chart and follow down to the 80% relative humidity diagonal. Follow horizontally across the chart to the line of 80° maximum temperature difference on the lower scale. Interpolation between the bounding heat loss diagonal lines will show the heat loss to be .124. Referring to the heat transmission table, we find that in connection with a 3-in. yellow pine roof and $\frac{3}{8}$ -in. built-up roofing, $1\frac{1}{2}$ in. of Mundet "Jointite" Corkboard will give sufficient insulation to preclude the possibility of condensation for the above set of conditions.

SPECIFICATIONS

Note: The following specifications will be found to cover the usual typical cases of roof insulation:

①

On Wood Deck Construction

On top of wood deck, first apply a single layer of . . . roofing felt laid in hot asphalt with joints lapped 3 in. Following this lay one course of . . . in. Mundet "Jointite" Corkboard, laid in a heavy mop coat of hot asphalt, the exposed cork surfaces to be left dry, ready for the application of the roofing.

②

Over Concrete Construction

On top of the concrete roof slab first apply two coats of asphalt primer, following which . . . in. Mundet "Jointite" Corkboard is to be laid in a heavy mop coat of hot asphalt, the exposed cork surfaces to be left dry, ready for the application of the roofing.

③

Over Steel Roof Decks

On top of steel deck lay one course of . . . in. Mundet "Jointite" Corkboard, laid in a heavy mop coat of hot asphalt, the exposed cork surfaces to be left dry, ready for the application of the roofing.

Note: Should roof insulation consist of two-layer work, the second course shall be applied on top of the first course in a dip coat of hot asphalt, with all transverse joints broken.

BREWERIES

P. Ballantine & Son, Newark, N. J.
F. & M. Schaefer Brewing Co., Brooklyn, N. Y.
Wm. Simons Brewing Co., Buffalo, N. Y.
Superior Brewing Co., Fort Worth, Texas

Jackson Brewing Co., New Orleans, La.
Globe Brewing Co., San Francisco, Cal.
Hyde Park Breweries Assoc., St. Louis, Mo.
Stroh Brewing Co., Detroit, Mich.

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Users of
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Heat Transmission

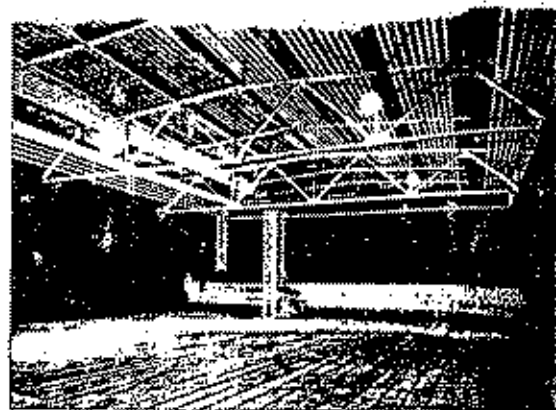
TABLE SHOWING HEAT LOSSES THROUGH ROOFS

Construction	Transmission in B.t.u. per sq. ft. per degree difference in temperature per hour
2-in. concrete slab and roofing, no insulation.....	.658
2-in. concrete slab and roofing, 1 -in. Jointite Corkboard	.206
2-in. concrete slab and roofing, 1½-in. Jointite Corkboard	.133
2-in. concrete slab and roofing, 2 -in. Jointite Corkboard	.122
2-in. concrete slab and roofing, 3 -in. Jointite Corkboard	.087
2-in. concrete slab and roofing, 4 -in. Jointite Corkboard	.067
3-in. concrete slab and roofing, no insulation.....	.610
3-in. concrete slab and roofing, 1 -in. Jointite Corkboard	.201
3-in. concrete slab and roofing, 1½-in. Jointite Corkboard	.151
3-in. concrete slab and roofing, 2 -in. Jointite Corkboard	.120
3-in. concrete slab and roofing, 3 -in. Jointite Corkboard	.086
3-in. concrete slab and roofing, 4 -in. Jointite Corkboard	.067
4-in. concrete slab and roofing, no insulation.....	.568
4-in. concrete slab and roofing, 1 -in. Jointite Corkboard	.197
4-in. concrete slab and roofing, 1½-in. Jointite Corkboard	.148
4-in. concrete slab and roofing, 2 -in. Jointite Corkboard	.118
4-in. concrete slab and roofing, 3 -in. Jointite Corkboard	.085
4-in. concrete slab and roofing, 4 -in. Jointite Corkboard	.066
6-in. concrete slab and roofing, no insulation.....	.500
6-in. concrete slab and roofing, 1 -in. Jointite Corkboard	.187
6-in. concrete slab and roofing, 1½-in. Jointite Corkboard	.143
6-in. concrete slab and roofing, 2 -in. Jointite Corkboard	.113
6-in. concrete slab and roofing, 3 -in. Jointite Corkboard	.083
6-in. concrete slab and roofing, 4 -in. Jointite Corkboard	.065
2-in. Yellow Pine and roofing, no insulation.....	.345*
2-in. Yellow Pine and roofing, 1 -in. Jointite Corkboard	.160
2-in. Yellow Pine and roofing, 1½-in. Jointite Corkboard	.127
2-in. Yellow Pine and roofing, 2 -in. Jointite Corkboard	.105
2-in. Yellow Pine and roofing, 3 -in. Jointite Corkboard	.078
2-in. Yellow Pine and roofing, 4 -in. Jointite Corkboard	.062
3-in. Yellow Pine and roofing, no insulation.....	.256*
3-in. Yellow Pine and roofing, 1 -in. Jointite Corkboard	.138
3-in. Yellow Pine and roofing, 1½-in. Jointite Corkboard	.112
3-in. Yellow Pine and roofing, 2 -in. Jointite Corkboard	.095
3-in. Yellow Pine and roofing, 3 -in. Jointite Corkboard	.072
3-in. Yellow Pine and roofing, 4 -in. Jointite Corkboard	.058
Sheet steel deck, no insulation.....	1.000†
Sheet steel deck and roofing, 1 -in. Jointite Corkboard..	.231
Sheet steel deck and roofing, 1½-in. Jointite Corkboard..	.167
Sheet steel deck and roofing, 2 -in. Jointite Corkboard..	.130
Sheet steel deck and roofing, 3 -in. Jointite Corkboard..	.091
Sheet steel deck and roofing, 4 -in. Jointite Corkboard..	.067
4-in. hollow tile, ½-in. roofing, no insulation.....	.485‡
4-in. hollow tile, ½-in. roofing, 1 -in. Jointite Corkboard	.187
4-in. hollow tile, ½-in. roofing, 1½-in. Jointite Corkboard	.142
4-in. hollow tile, ½-in. roofing, 2 -in. Jointite Corkboard	.114
4-in. hollow tile, ½-in. roofing, 3 -in. Jointite Corkboard	.083
4-in. hollow tile, ½-in. roofing, 4 -in. Jointite Corkboard	.065
6-in. hollow tile, ½-in. roofing, no insulation.....	.395‡
6-in. hollow tile, ½-in. roofing, 1 -in. Jointite Corkboard	.171
6-in. hollow tile, ½-in. roofing, 1½-in. Jointite Corkboard	.133
6-in. hollow tile, ½-in. roofing, 2 -in. Jointite Corkboard	.109
6-in. hollow tile, ½-in. roofing, 3 -in. Jointite Corkboard	.080
6-in. hollow tile, ½-in. roofing, 4 -in. Jointite Corkboard	.063

*On yellow pine, nominal thickness specified, actual thickness used in tests.

†Factor as furnished by the Truscon Steel Co.

‡¾-in. plaster on underside and 2-in. concrete roof slab over tile is assumed.



USE OF CHART

Locate the room temperature on Room Temperature Scale at top of chart and follow down on the corresponding line to its intersection with the line which represents the required humidity percentage, finding this point by interpolating, if necessary, on that segment of the vertical line between the diagonal lines, to obtain any required intermediate percentage between those shown in the left-hand column. For the sake of explanation the horizontal line so found will be referred to as the "humidity horizontal" for any particular case in point.

Next, determine the point of maximum difference in temperature on the scale at the bottom of the chart and follow up on the corresponding vertical line until it intersects the "humidity horizontal" and consider the point of intersection as point "A." Note where point "A" lies between two of the diagonal lines which represent amount of heat loss, and by interpolation between these right lines determine its value as compared to the figures in the right-hand column. The value so found will be the maximum allowable heat loss.

Determine from the Table of Heat Loss the thickness of insulation which will show a heat loss less than the value of "A" using the section of the table which shows the proposed type of construction combined with the insulation.

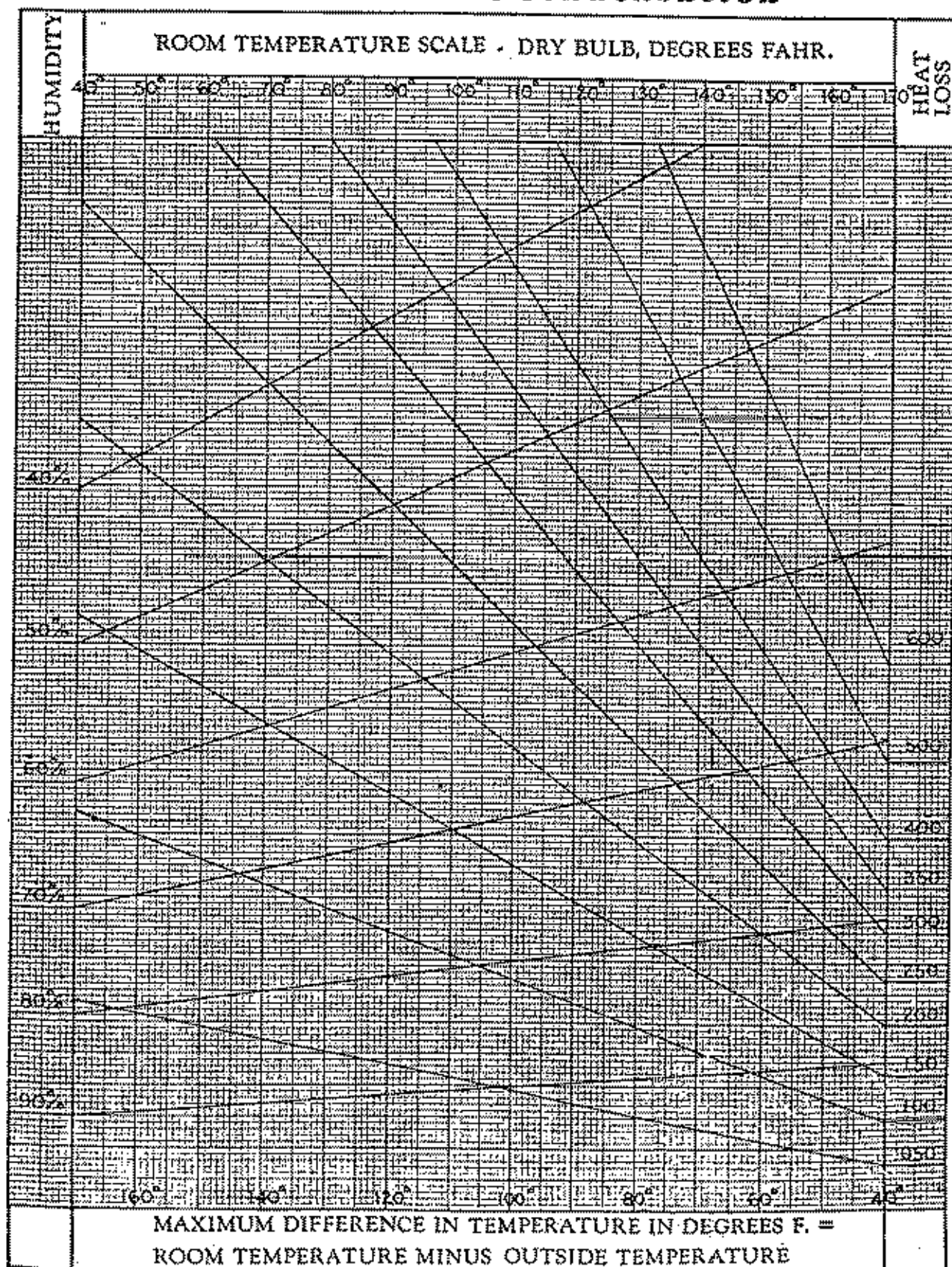
*See also typical construction details showing heat loss tabulation.

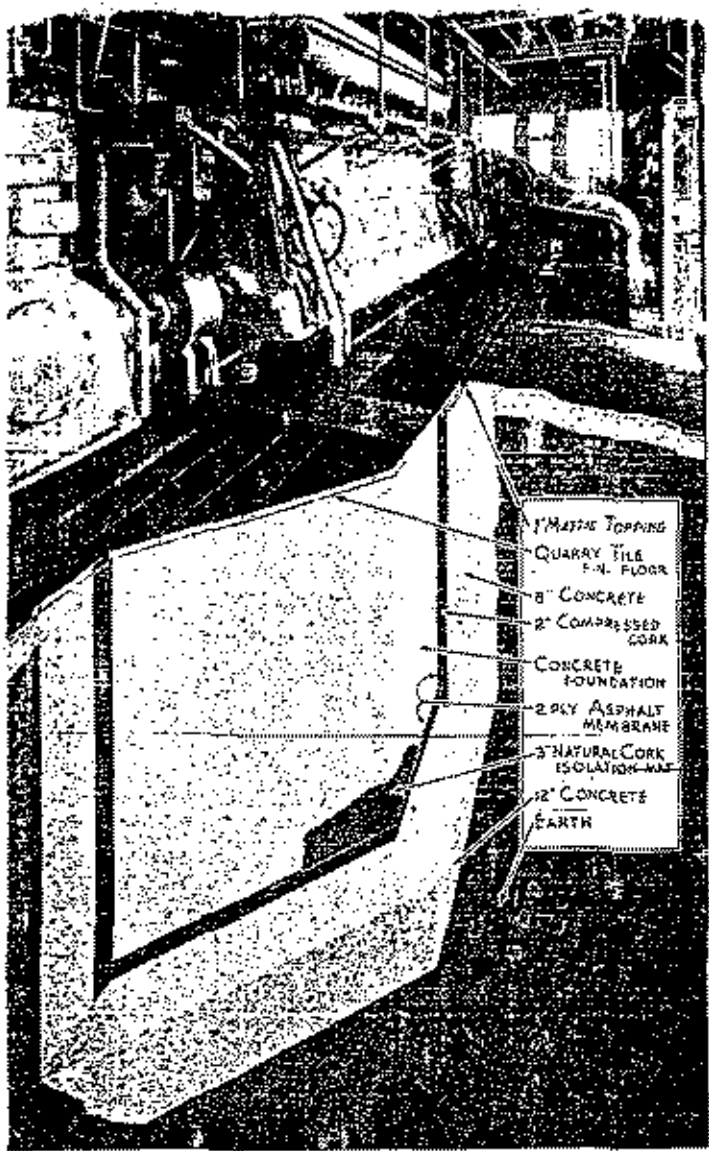


Mundet Acoustical Corkboard performs a dual function in this church. In addition to furnishing necessary acoustical correction it insulates the ceiling.

HEAT LOSS CHART

For Determining the Maximum Allowable Heat Loss in Roofs to Prevent Condensation





Vibration Isolation . . .

cause the resistance to loads, instead of being proportional to the amount of deflection, is proportional to the compression in the air cells; hence, under vibratory variations in loading, the active deflection is much smaller than for an elastic substance, while the cushioning effect is higher.

Cork isolation has proven itself under the pragmatic test of use, and many thousands of installations, some of them over a quarter of a century old, are giving complete satisfaction; often making possible the use of machines which without it could not be used in their present locations because of the vibration accompanying their operation.

Type of Cork Isolation to Use

Mundet Cork Isolation is made in two general types to conform with the class of loadings imposed upon it. They are as follows:

(1) **Mundet Natural Cork Isolation Mat**—This form of cork isolation is suited to loads of about 800 to 2000 lb. per sq. ft., normally encountered in machinery foundations. Blocks of natural cork of the required thickness are held within a rigid steel frame or are bound with asphalt paper applied in hot asphalt to the top and bottom sides of the strips. The plates when laid together form a continuous mat isolation of the exact size necessary. For isolating a machine in a pit with an envelope of cork, as shown in the illustration herewith, it is customary to use asphalt paper bound natural cork isolation mat. Where the machine is mounted on a floor slab without side isolation, it is customary to use steel bound natural cork isolation mat.

In the case of average machine vibrations $1\frac{1}{2}$ to 2 in. of natural cork is adequate, but for more intense vibrations or shock loads, the thickness should be increased to 3 or 4 in.

(2) **Mundet Machinery Isolation Cork**—This is the material first used as isolation cork and, while it has been superseded by the above material for light and medium loads, for loads above 2000 lb. per sq. ft., Mundet Machinery Isolation Cork has not been surpassed. This cork is made in sheets, of various thicknesses, and in three densities, namely, light, medium and heavy.

For loadings of 2000 to 3000 lb. per sq. ft., it is customary to use either light or medium density, according to the character of the vibration. Light density is used for light vibrations and medium density for heavy vibrations. From 3000 to 3500 lb. per sq. ft., either medium density or heavy density is used, according to the character of the vibratory load, and from 3500 to 6000 lb. per sq. ft., it is customary to use heavy density. The thicknesses of machinery isolation cork used depend upon the frequency and amplitude of the vibration present, but the most common thicknesses employed are $1\frac{1}{2}$, 2, 3 and 4 in.

Among the multitudinous uses to which cork has been applied, the one which is expanding most rapidly at the present time is the utilization of its peculiar physical characteristics in the elimination of machine vibration.

The principal characteristics of a medium for machinery isolation in the order of their importance, are:

- (1) Ability to support the loads imposed upon it without too great, or too variable, a deflection.
- (2) Ability to absorb vibration in the machine without transmitting it to the surrounding structure.
- (3) Permanence, including ability to withstand repeated loading without fatigue or permanent set, ability to withstand the action of water, oil, acids or alkalis without deterioration, ability to maintain its resilience with age.

Of the many materials that have been used for isolation purposes at one time or another, cork has proved itself to be pre-eminently fitted for this work. It contains over 50% air by volume, and is made up of a myriad of tiny cells, hermetically sealed from each other by the structure of the wood. Its compression curves, therefore, resemble more nearly those of a gas than of an elastic solid, as is evident on page 49. This feature is important, be-

Users of
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MUNDET CORK CORPORATION

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INSULATION FACTORIES: HILLSIDE, N. J., BROOKLYN, N. Y.

BRANCHES

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BOSTON, MASS.
CHICAGO, ILL.

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DETROIT, MICH.
HOUSTON, TEX.

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LOS ANGELES, CAL.
MEMPHIS, TENN.
NEW ORLEANS, LA.

PHILADELPHIA, PA.
ST. LOUIS, MO.
SAN FRANCISCO, CAL.
SYRACUSE, N. Y.

CANADA

MUNDET CORK AND INSULATION, LTD., MONTREAL, QUE., TORONTO, ONT., WINNIPEG, MAN., VANCOUVER, B. C.

PORTUGAL

MUNDET ET CIA, LISBON

MUNDET CORK PRODUCTS, LTD., LONDON, ENGLAND

DISTRIBUTORS

BALTIMORE, MD., McCormick Asbestos Co.
BUFFALO, N. Y., Claxton Asbestos Co.
CHARLOTTE, N. C., Geo. A. White & Co.
CLEVELAND, OHIO, Standard Asbestos & Mfg. Co.
HARTFORD, CONN., The Hartford Cement Co.
MINNEAPOLIS, MINN., Asbestos Building Material Co.
NASHVILLE, TENN., John Baughard & Sons Co.

OKLAHOMA CITY, OKLA., Standard Roofing & Material Co.
NORFOLK, VA., F. H. Gaskins Corp.
PORTLAND, ORE., Pacific Asbestos & Supply Co.
RICHMOND, VA., Virginia Insulation Co.
SALT LAKE CITY, UTAH, Louis A. Ruser
SEATTLE, WASH., Pioneer Sand & Gravel Co.
TULSA, OKLA., Standard Roofing & Material Co.

UTICA, N. Y., Gen. Weisenburger

For other Mundet products, including Cork Insulation and Cork Bulletin Board, see File Index

"JOINTITE" CORK TILE FLOORING

Mundet "Jointite" Cork Tile is manufactured in two thicknesses, namely $\frac{1}{4}$ and $\frac{1}{2}$ in.

Mundet "Jointite" Cork Tile is composed of the very best selected cleaned and screened cork shavings. These shavings are placed in moulds of the proper depth to produce the tile thicknesses desired and are subjected to tremendous pressure to insure the proper density for floor use. The moulds are then placed in an oven maintained at a relatively high degree of heat. This heat allows the resin in the cork shavings to liquefy and acts as a binder for the shavings, thus no foreign substance is needed to hold the shavings together and the natural properties of the cork is not impaired in any way.

"Jointite" Cork Tile is produced in three shades, all of which are brown in color, some light, some medium and some dark. These shades are obtained by governing the period of baking. Proper designs and arrangements of an artistic nature can be obtained by laying the tile in the different shades.

Ideal for

Corridors, halls, vestibules, ramps, stair treads, hospitals, schools, colleges, railroad stations, libraries, telephone rooms, offices, gymnasiums, churches, bathrooms, bedrooms, sleeping porches, nurseries, banks, theatres, courtrooms, art galleries, museums, etc.

Uses and Advantages

- (1) Comes in various sizes, suitable for any floor.
- (2) Does not shrink, swell or warp.
- (3) Only absolutely pure cork used in its manufacture.
- (4) Immune to grease, ink and most liquids.
- (5) Cannot catch or absorb dirt or moisture.
- (6) Easily cleaned, washable with soap and water.
- (7) Varying shades of color are created by varying the temperature when baking. No coloring matter is used.
- (8) Cannot splinter, tear, corrode, rot or crumble.
- (9) Easy to walk upon due to its natural elasticity.
- (10) Hard heels on Mundet "Jointite" Cork Tile are noiseless.
- (11) Cozy and warm owing to its insulating qualities.
- (12) Restful to the eye as well as to the ear.
- (13) Highly compressed, hence strong, firm and durable.
- (14) Not slippery, even when wet.

Sizes

12x36 in. is standard size. We also make standard 6, 9 and 12-in. squares; special 3, 4 and 5-in. squares; 3x18.

4x18, 6x18 and 9x18-in. border strips; and 9x36, 6x36, 6x12, 4x36, 4x8, 4x12, 3x12, 3x9 and 3x6-in. oblong strips.

Cove Base

We furnish Mundet "Jointite" Cork Tile Sanitary Cove Base in all heights.

Specifications

All cork tile stair treads and cork tile floors to be $\frac{1}{4}$ or $\frac{1}{2}$ in. thick cork tile.

The tile to be highest grade pure cork throughout, solid, compressed, properly baked. There must be no forcing substances whatever in the tile. Only high grade, waterproof, elastic cement shall be used in applying the tile. All joints to be securely and hermetically cemented.

Where wood is used as a base under tile, nothing inferior to tongued and grooved flooring $\frac{1}{2}$ in. thick, 6 in. maximum width, shall be used to support Mundet "Jointite" Cork Tile. It must be well fitted, tight, firmly nailed, smooth and level.

Where cement is used as a base under tile, it must be of a nailing quality and it shall be at least 1 in. thick and shall be made of 3 parts of acceptable clean screened sand, and 1 part fresh cement. It must be troweled smooth. Allowance must be made for $\frac{1}{4}$ or $\frac{1}{2}$ in. thickness of tile. Do not lay cork tile before the concrete has set and dried.

Note (1): *Finishing*—Mundet "Jointite" Cork Tile is adaptable to any type of nosing on stair treads.

Note (2): *Cove Base*—The wall and floor must make a true and smooth right angle with each other so that the Mundet "Jointite" Cork Tile Cove Base will fit evenly throughout with both the wall and floor. There must be no foreign lumps or dirt on the surfaces. Surfaces may be of any standard acceptable backing—wood, plaster, cement, etc.



The Norwood Telephone Exchange, Cincinnati, Ohio—Flooring of "Jointite" Cork Tile