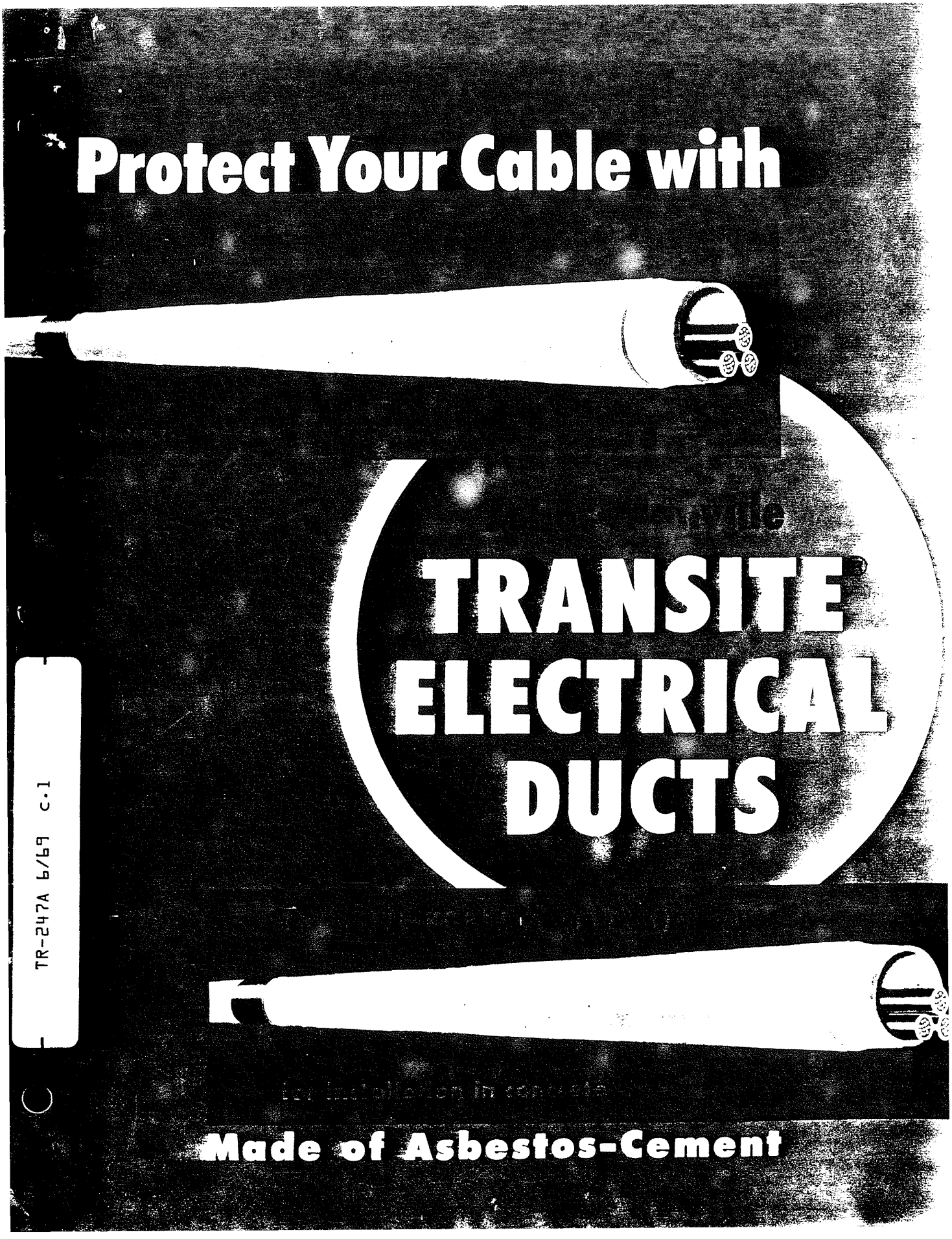


TR-247A 6/69 c.1

CRMC-SBGAB-ConduitPipe-000018
SC-GRAY-2400

Transite*Conduit provides a durable and dependable protection for your cable system. Introduced to America by Johns-Manville, this time-tested material has been buried in the ground or encased in concrete in a wide variety of environments during the past 30 years. When obsolescence or system changes dictate cable removal, pulling out the old and pulling in the new are easily accomplished because of the good condition of Transite after years of service. Transite's combination of resistance to heat, fire, chemicals, abrasion and other mechanical attacks preserves the integrity of your duct system.

Transite is a registered Johns-Manville trademark identifying products made from three inorganic ingredients—asbestos fiber, Portland cement and silica. From a slurry or wet mixture of these stone materials, Transite Conduit is formed on a mandrel into a homogeneous duct. It is then steam-cured under pressure in order to increase its inherent chemical stability and physical properties.

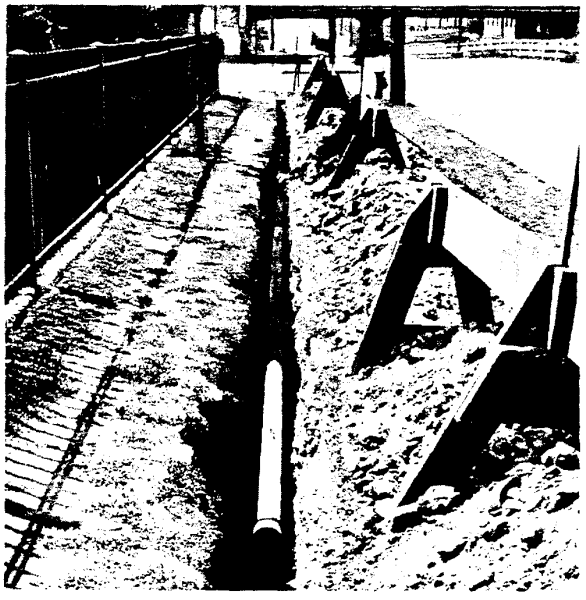
The steam curing of Transite Conduit is one of many instances of J-M pioneering in the duct field — drawing upon a continuing program of product developments and refinements conducted at Johns-Manville Research Center.

Johns-Manville took another step forward with the introduction of Plastic Couplings. These couplings provide:

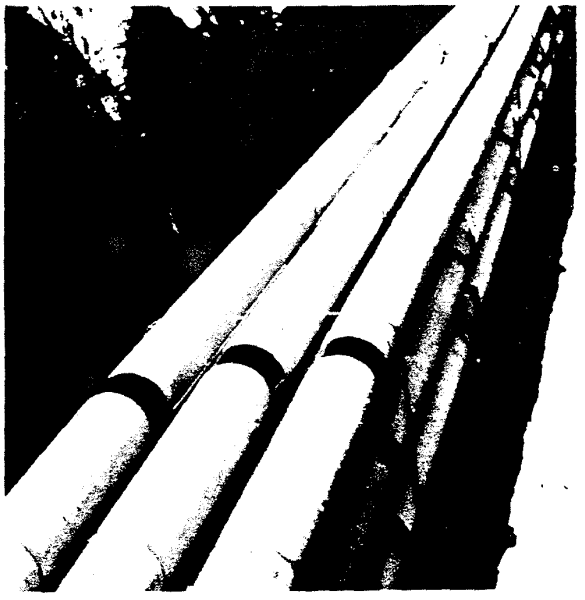
(1) Easily-applied joints between duct lengths
(2) Joint flexibility permitting deflections up to 5° without special fittings
(3) A tight and lasting seal which keeps out silt.

Specification requirements for Transite Conduits are detailed in Johns-Manville Material Specification DS 928-68. Transite Conduits also meet Federal Specification W-C-571b. For dimensional details of conduit and fittings, see Johns-Manville folder TR-271A.

Johns-Manville backs up every Transite purchase by thorough sales service . . . many conveniently located sales offices and representatives . . . maintenance of stocks by over 300 distributors served by seven J-M plants in the United States and Canada . . . all plus a new delivery service by trucks "unit-loaded" at the factory in compact, standard units to facilitate unloading and handling on arrival.



Transite Conduit (Type II), with its thicker wall, is laid directly in earth without concrete encasement and is also used for exposed installations. In place of the Transite Couplings shown above, J-M Plastic Couplings are now most always used.



Transite Korduct (Type I), the thinner walled of the two types of Transite Conduit, is designed especially for installation in concrete. Korduct shown here is joined by J-M Plastic Couplings which are now most always specified. Transite Couplings are also available, however.

*TRANSITE is a registered Johns-Manville trademark for its brand of asbestos-cement products.

CRMC-SBGAB-ConduitPipe-000019

CONDUIT REQUIREMENTS	TRANSITE PROPERTIES	TRANSITE CONDUIT PERFORMANCE
	Does not burn	Incombustible asbestos-cement contains only inorganic materials that do not burn, char or give off noxious fumes, even when exposed to direct flame or to occasional arcing on damp duct walls.
	Corrosion Resistant	Non-metallic Transite will not rust and is immune to electrolysis. This material is not affected by water or by most corrosive agents including acids, alkalis, aromatics or aliphatics encountered in soil around industrial plants. Specifically, Transite resists benzine, kerosene, oils, greases and tars.
	Heat Resistant	Transite remains inert and unaffected even under high thermal stresses of cable overloads or fault burn-off. Duct never bonds to cable; nor does an arc cause melting, fusing or adhesion.
	Strong	Type I provides adequate strength for concrete encasing; thicker-walled Type II resists sustained earth loads and traffic pressures, when properly installed. Both Types maintain specification strength in service, without creep.
HEAT DISSIPATION	Allows cable to run cooler	Higher heat absorption at surface and Transite's lower thermal resistivity combine to dissipate heat better and make cables run cooler, thus reducing cost for heat losses. (This fact provides reserve capacity, thus boosting system capability.)
	Fire Wall	Incombustible Transite isolates cable inside a fire wall, keeps out external fires.
	Mechanical Strength	Its ultimate strength provides adequate cable protection. Transite will not harden or deform at loads below ultimate.
EASY TO INSTALL	Light in Weight	Facilitates unloading and handling of ducts.
	Long Lengths	Expedites laying of duct run.
	Joins quickly	Transite and Plastic Couplings are designed to permit rapid, hand assembly on the job.
	Wide Choice of Fittings	Speeds assembly of duct bank even when complex direction changes occur.
	Smooth Bore	Minimizes abrasion of cable sheath or jacket.
	Low Coefficient of Friction	Facilitates cable pulling and decreases strains on cable and equipment. This feature is independent of temperature.
	Does not bond to cable	Transite's resistance to deterioration and heat (even of a fault) assures that, whenever necessary, cable can be removed and new cable pulled in.

CRMC-SBGAB-ConduitPipe-000020

TRANSITE CONDUIT (TYPE II)

Eliminates Concreting-in

Transite Conduit (Type II), the thicker-walled asbestos-cement duct, is designed for installation underground without concrete reinforcement. Through the elimination of concrete, it enables the installer to make substantial savings in time, labor and materials. It may be installed in exposed locations, indoors and out.

It has the combination of strength factors necessary to withstand all normal soil stresses. These strengths result from the construction of Transite in which millions of asbestos fibers dispersed throughout the structure reinforce the cement in much the same manner as steel. Consequently, Transite has six times the tensile strength and three times the compressive strength of first quality ordinary concrete.

Millions of feet have been installed without concrete envelopes as laterals under many streets, rights of way, airfields, airports, heavy industrial yards, etc.

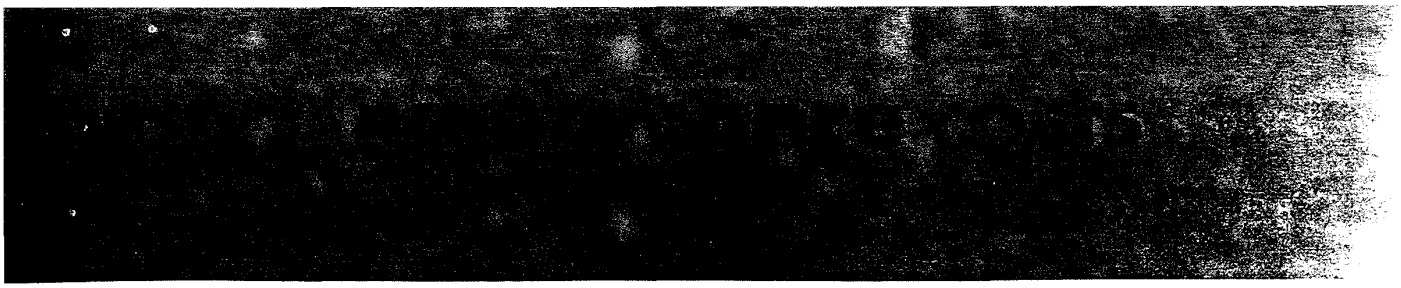
Plastic Couplings Reduce Costs

Today J-M Plastic Couplings are used not only to speed joining of duct lengths, but also to offer considerable installation savings by permitting in-contact assembly of many duct banks. Savings are possible because of the nearly identical O. D. of plastic couplings and ducts—and because of the crush strength, rigidity and durability of Transite Ducts. For example, on small distribution banks vertical separation between ducts can be eliminated. On signal and control banks elimination of both vertical and horizontal separation is practical. Elimination of spacing reduces installation costs because considerably less trenching and backfilling is required.

Confines Cable Faults

When cable faults occur any heat or arcing that develops is confined within the Transite duct because of its incombustible properties. The heat of the fault will not cause Transite to sag or deteriorate. Arcing may cause slight spalling, but the residue is not abrasive.

CRMC-SBGAB-ConduitPipe-000021



Minimizes Replacements in Corrosive Soils

The asbestos-cement composition of Transite Ducts is highly resistant to corrosive attack whether from alkaline or acid soils. These ducts stand up in corrosive cinder fills, salt marshes and other troublesome soils. Being non-metallic they are immune to galvanic action, or electrolysis. Transite Ducts usually outlast other types of duct materials even when corrosive action is accentuated by shock and vibration.

Easily Cut and Machined

Common tools such as a six point rip saw or a large hack saw with a chrome-moly blade will cut Transite Conduit easily and rapidly. The fastest and most efficient tools, however, are those available from Johns-Manville for cutting and tapering asbestos-cement ducts on the job. These tools are stocked at convenient points ready for shipment. Folders giving complete descriptions are available from Johns-Manville Pipe Division sales offices.

Needs No Protective Coating Outdoors

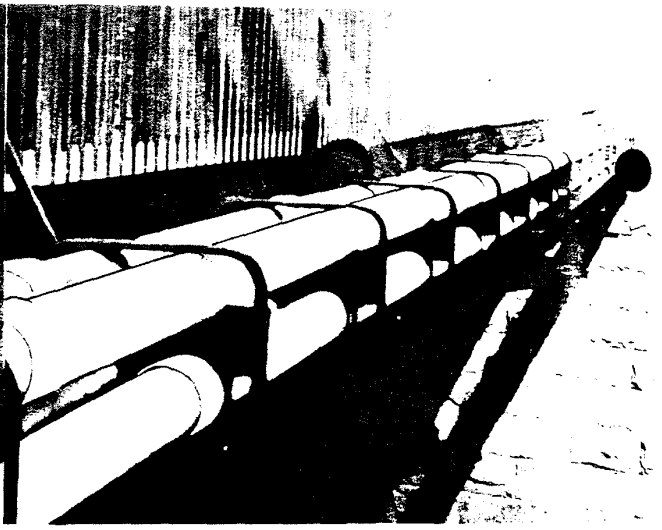
When used in exposed locations Transite Conduit (Type II), with Plastic (or Transite) Couplings, needs no paint or periodic maintenance to protect it against weather, corrosive atmosphere or gases. In exposed locations it often outlasts competing duct materials many times over. However, it may be painted or easily cleaned for decorative purposes, if desired.

No Expensive Special Fittings Needed

Johns-Manville supplies a wide range of standard fittings for use with Transite Conduit. These fittings are made of the same asbestos-cement material as the ducts themselves and are machined to the same standard taper. These standard fittings provide maximum flexibility in laying out or constructing duct systems.

CRMC-SBGAB-ConduitPipe-000022

ECONOMICAL



At last report these Transite Ducts were still on the job after over 25 years of exposure to heat, corrosive gases and vibration.

Transite Conduit Reduces Costs in Corrosive Atmospheres

An example of Transite Conduit's ability to outlast ferrous duct materials several times over is pictured above right. After nearly three decades of service this J-M Duct still has many years of useful life remaining. In this exposed installation it is subjected to heat, corrosive gases, vibration and weather. No painting or maintenance is required.

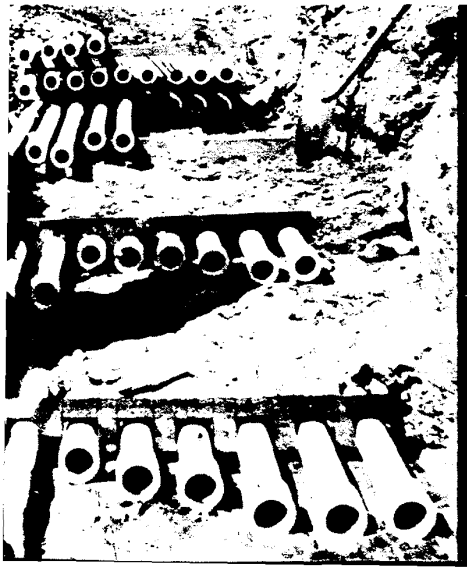
Utilities Obtain Low Cost Banks and Long Term Protection

A well known public utility installed this Transite Conduit bank (below left) without concrete encasement. If cable failure occurs, the non-combustible Transite will safeguard adjacent cables against heat and flame. The damaged cable can be withdrawn conveniently because Transite Conduit cannot sag and will not adhere to the cable. Transite cannot contribute to the formation of explosive or toxic gases.

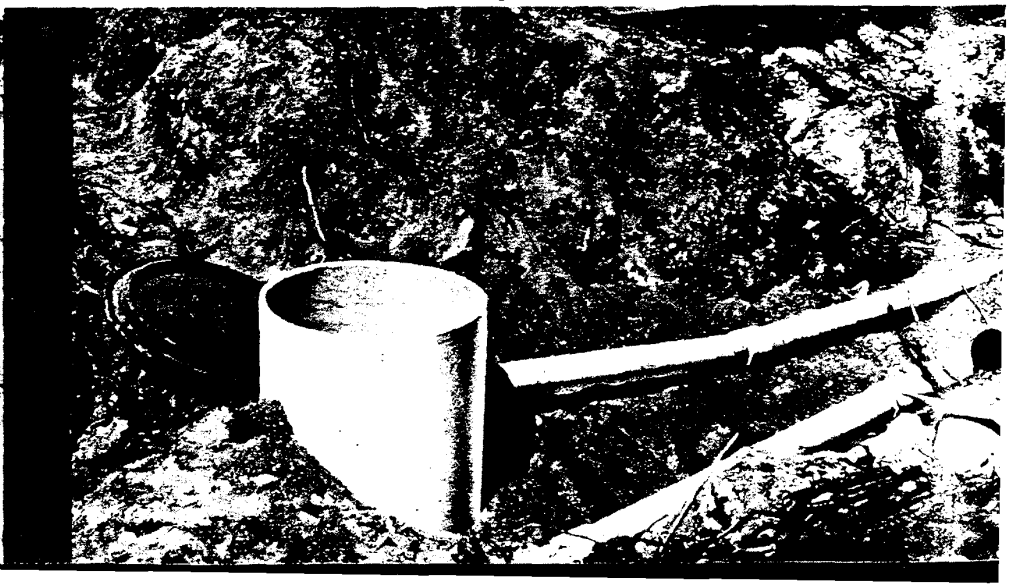
Transite Conduit Systems in Residential Areas Provide Dependable Service at Moderate Cost

A Transite Conduit system with large diameter Transite Pipe Service Boxes (shown below) provides most of the flexibilities and conveniences of a conventional cable subway and eliminates unsightly and vulnerable overhead lines. A practical application in suburban areas, this installation provides the essentials of a good duct system at moderate cost.

A large Transite Conduit bank laid directly in earth by a public utility in the Far West.



Transite Conduit and a Transite Pipe Service Box during installation in an Eastern Residential Community.



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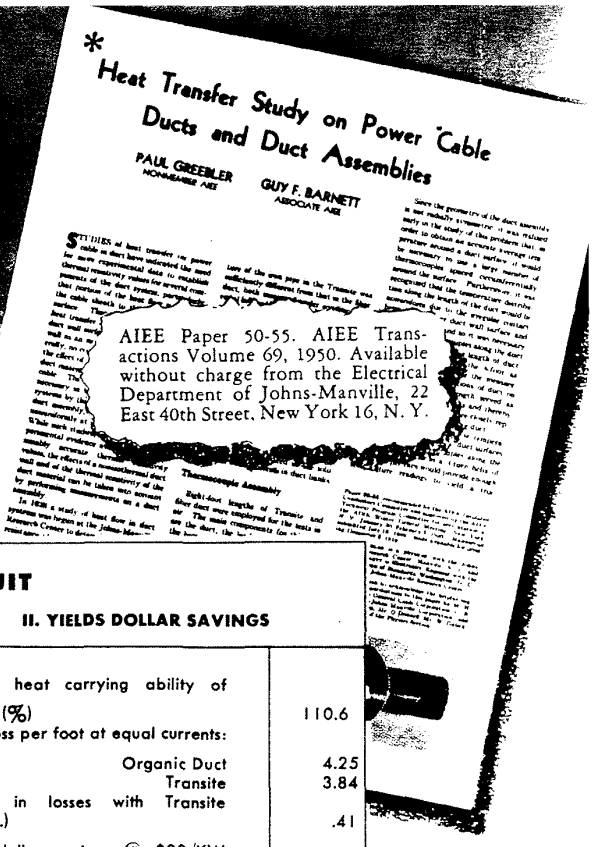
CABLES RUN COOLER



HOW TRANSITE CONDUIT

I. INCREASES CURRENT CARRYING CAPACITY	TRANSITE INORGANIC DUCTS	ORGANIC DUCTS
1. Total Therm. Res. to Dielectric Loss (thermal ohms)	5.61	6.03
2. Total Therm. Res. to Copper Loss (thermal ohms)	4.21	4.62
3. Temp. rise from Dielectric Loss (°C)	1.9	2.1
4. Allowable rise for Copper Loss (°C)	59.1	58.9
5. Allowable watts for Copper Loss per ft. cable	4.70	4.25
6. Allowable Current—(Amps per cdr)	398	378
7. Allowable Current—(Relative %)	105.1	100

II. YIELDS DOLLAR SAVINGS	
8. Greater heat carrying ability of Transite (%)	110.6
9. Watts loss per foot at equal currents:	
Organic Duct	4.25
Transite	3.84
10. Savings in losses with Transite (watts/ft.)	.41
11. Annual dollar savings @ $20/KW per M ft.	$8.20
12. Annual greater charges for Transite per M ft. on basis: 1⅓ ducts per cable Diff. mat. cost—$.04/ft. Carry. Chgs.—Int. 6%, Taxes 2½% Depr. 1%; Total 9½%	$5.06
13. Net annual savings with Transite $ per M ft.	$3.14

CONDITIONS: *Cable*—3 Cdr. 500 MCM Compact Sector, 175 mils paper, 125 mils lead 15 KV grounded neutral (8th Edition AEIC Spec.) Theoretical Cable Diam.—2.52". *Duct*—2 x 2 bank, 3 loaded, 4" ducts, 6½" spacing, 30" earth cover, 3" Concrete around ducts. Concrete-Soil Resistivity—84 (watt-cm). Load Factor 75%—Loss Factor 62½%. Earth ambient 20C.

Lower I^2R Losses, Increased System Capacity

The figures given in the table above should interest every distribution engineer because system losses are still a major expense of the electrical power industry. This sum is estimated to be more than four hundred million dollars annually for the United States. It is generally agreed that system losses can be reduced by improving the dissipation of heat from conductors under load.

The figures in the table are based on a paper approved for presentation by the AIEE Insulated Conductor Committee*. This paper reports test conducted for many years by the Johns-Manville Research Center to determine accurately how Transite Ducts improve the dissipation of heat by conductors under load.

The results of these tests prove that Transite Ducts will carry heavier current loads than organic ducts when the sheath temperatures are the same. This means that cables installed in Transite Ducts can carry heavier loads at peak conditions than the same cables installed in organic ducts.

It also means that when a conductor is under a given load, its temperature will be lower when it is installed in a Transite Duct than when it is installed in an organic duct. The lower temperature of the conductor results in a lower electrical resistance with correspondingly lower I^2R losses. The economic result of the reduction in I^2R losses depends, of course, on the monetary value per KW. The one selected for the table is considered reasonable. Lower operating temperatures can also prolong insulation life, resulting in more reliable service and longer cable life.

All these savings—plus the other advantages of Transite Ducts—furnish more than ample economic justification for their use.

CRMC-SBGAB-ConduitPipe-000024

TRANSITE KORDUCT (TYPE I)

Korduct Outlasts the Cables It is Designed to Protect

Transite Korduct (Type I), the thinner walled Transite Duct,was developed particularly for installations where concreting-in is required — in main line cable subways and in masonry structures.

Type I is proportionately as strong as Type II and maintains its strength in service. Transite is also corrosion-resistant, immune to electrolysis and galvanic action. It cannot rot or rust. It is as permanent as stone because its ingredients are stone in origin — asbestos, cement and silica. No other duct material offers so much promise of permanence. Therefore, Transite Korduct can be expected to protect cables long after its cost has been amortized.

Carries More Cable Capacity Per Duct Bank Cross-Section

As shown at right above, Transite Ducts are unlike other ducts in that the wall itself is a fireproof barrier because of its asbestos-cement construction. This property of Transite can be utilized to reduce the separation between ducts. The closer spacing accomplishes two things: (1) it provides a saving in concrete, (2) it permits the bank to be designed to carry greater cable capacity than other ducts in banks of the same size. This desirable property of Transite Korduct has been utilized advantageously by many designers of cable subways.

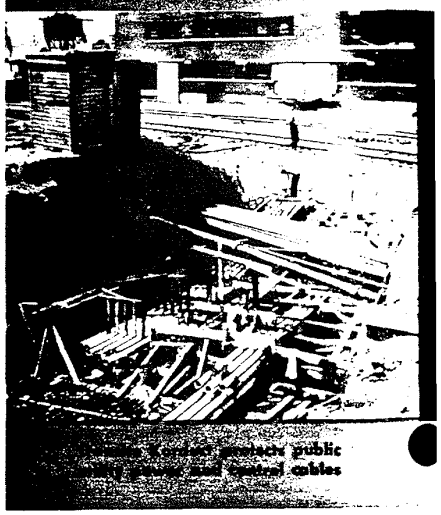
Affords Greater Protection Against Fire

Despite modern precautions, heat and fire are still a potential hazard. Consequently, cables should have the protection that Transite Ducts provide. Transite confines burn-outs, safeguards adjacent cables from damage and reduces the possibility of explosion, fire and panic.

Made of incombustible asbestos and cement, Transite Korduct will not burn, smoulder or generate smoke or fumes. This duct material cannot contribute to the formation of explosive gases. The fireproof protection of Transite's asbestos-cement construction is vitally necessary in locations such as subways, tunnels, and power plants.

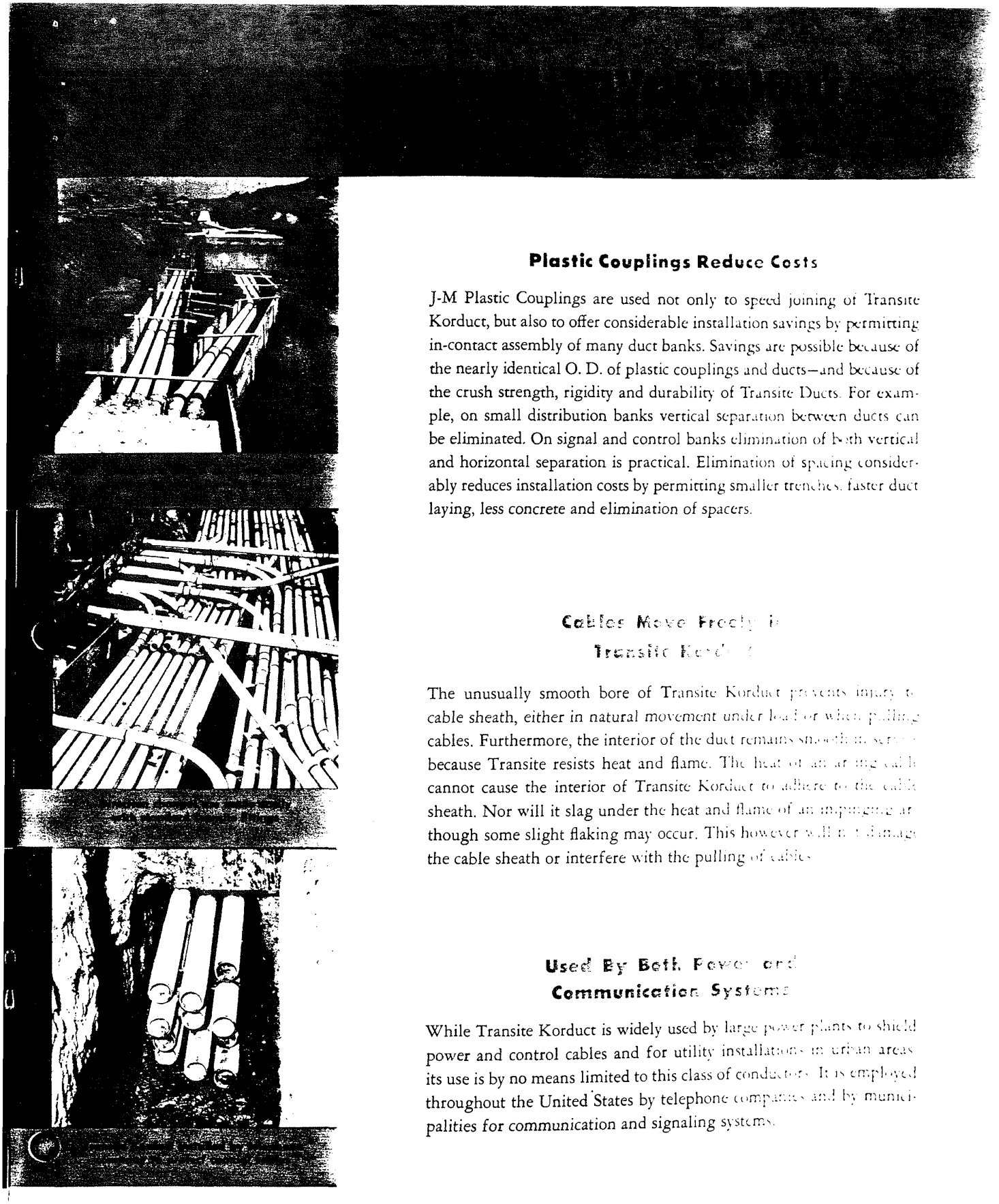
ducts in
duct assembly

guard many
gainst fire



public
cables

CRMC-SBGAB-ConduitPipe-000025



Plastic Couplings Reduce Costs

J-M Plastic Couplings are used not only to speed joining of Transite Korduct, but also to offer considerable installation savings by permitting in-contact assembly of many duct banks. Savings are possible because of the nearly identical O. D. of plastic couplings and ducts—and because of the crush strength, rigidity and durability of Transite Ducts. For example, on small distribution banks vertical separation between ducts can be eliminated. On signal and control banks elimination of both vertical and horizontal separation is practical. Elimination of spacing considerably reduces installation costs by permitting smaller trenches, faster duct laying, less concrete and elimination of spacers.

Cables Move Freely in Transite Korduct

The unusually smooth bore of Transite Korduct prevents injury to cable sheath, either in natural movement under load or when pulling cables. Furthermore, the interior of the duct remains smooth in service because Transite resists heat and flame. The heat of an arcing cable cannot cause the interior of Transite Korduct to adhere to the cable sheath. Nor will it slag under the heat and flame of an impinging arc though some slight flaking may occur. This however will not damage the cable sheath or interfere with the pulling of cables.

Used By Both Power and Communication Systems

While Transite Korduct is widely used by large power plants to shield power and control cables and for utility installations in urban areas its use is by no means limited to this class of conductors. It is employed throughout the United States by telephone companies and by municipalities for communication and signaling systems.

CRMC-SBGAB-ConduitPipe-000026

TRANSITE FITTINGS

time and expense

Standard Transite Fittings are available in wide variety to provide maximum flexibility in laying out or constructing a duct system. These fittings are made of the same asbestos-cement material as the ducts themselves and are machined to a standard taper so that they can be used with Transite Conduit Types I and II or with other Transite Fittings.

Many unusual radii bends or sweeps can be made by using standard Transite fittings. For instance, the 5 degree Bend Segment alone can form a wide variety of different curvatures in any multiple of 5 degrees. Used with other Transite curved fittings in various combinations, it can form curvatures of odd degrees. Thus users can clear unexpected obstructions, accommodate layout revisions and simplify cross-overs and transformations.

In addition to the many fittings for facilitating direction changes, other fittings are available. There are fittings for making terminal connections, for joining Conduit and other types of ducts in same or different sizes . . . to provide for movement due to expansion and contraction . . . to join duct runs. These fittings are covered more fully in Folder TR-311A, *Instructions for installing Transite Ducts* and TR-271A, *Transite Ducts and Fittings—Dimensional Data.*

J-M PLASTIC COUPLINGS (left) make it easy to rapidly assemble successive lengths of Transite Ducts. They form a silt-tight joint and assure correct duct alignment. These couplings also permit slight changes in direction.

TRANSITE FITTINGS

For joining ducts

Tapered Coupling joins tapered ends of duct. One furnished with each duct length.

Duplex Adaptor joins a tapered end to an untapered end of same duct size and type.

Double Duplex Adaptor joins two untapered ends of same duct size and type.

Straight Adaptor joins various or same types of duct of same size.

Reducing Adaptor joins various types of ducts of different sizes.

Expansion Coupling provides for movement due to expansion, contraction or vibration.

For making terminal connections

End Bells (Standard and Expansion) designed to protect cables from abrasion.

Terminal Box Bell and Flanged Connector for terminating duct lines at metal or wood boxes.

For directional changes

Bends—45° and 90°; **Curved Segments**—11¼° and 22½°; **Sweeps**—12′ 6″ and 25′ radii; **Deflection Couplings**—5⅝°; **5° Bend Segments** (male taper on one end, female taper on other).

Ask for instructions for INSTALLING

TRANSITE DUCTS

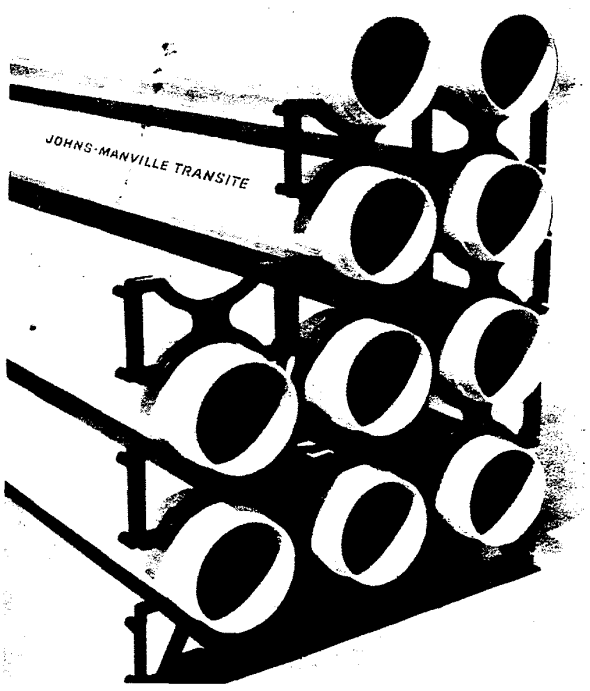
CRMC-SBGAB-ConduitPipe-000027

Size (I. D.)	Wall Thickness, Inches	Standard Length, Ft.	Weight* Lb. per Ft.
2	.35	5	2.2
3	.37	10	3.2
4	.37	10	4.1
5	.40	10	5.5
6	.40	10	6.5

Size (I. D.)	Wall Thickness, Inches	Standard Length, Ft.	Weight* Lb. per Ft.
2	.28	5	1.7
3	.29	10	2.5
3 1/2	.30	10	2.9
4	.30	10	3.3
5	.33	10	4.5
6	.34	10	5.5

*One Coupling per length.

Plastic spacers simplify Korduct installation in encased banks



Plastic spacers are available for all Korduct sizes listed above, and can be supplied with 1", 1½", 2" or 3" separation between centers. They are molded in one way units with two lugs on one side and two mating holes on the other to permit rapid, secure field assembly of multiple units. Pre-assembled and cemented 2-, 3- and 4-way multiples are also available from the factory.

Features include:

Skeleton design for maximum concrete between ducts.

Rugged construction to withstand rough handling both en route and on the job.

Economy because they speed installation and are competitively priced with other spacers.

Lower inventories because interlocking design permits field assembly of multiple units.

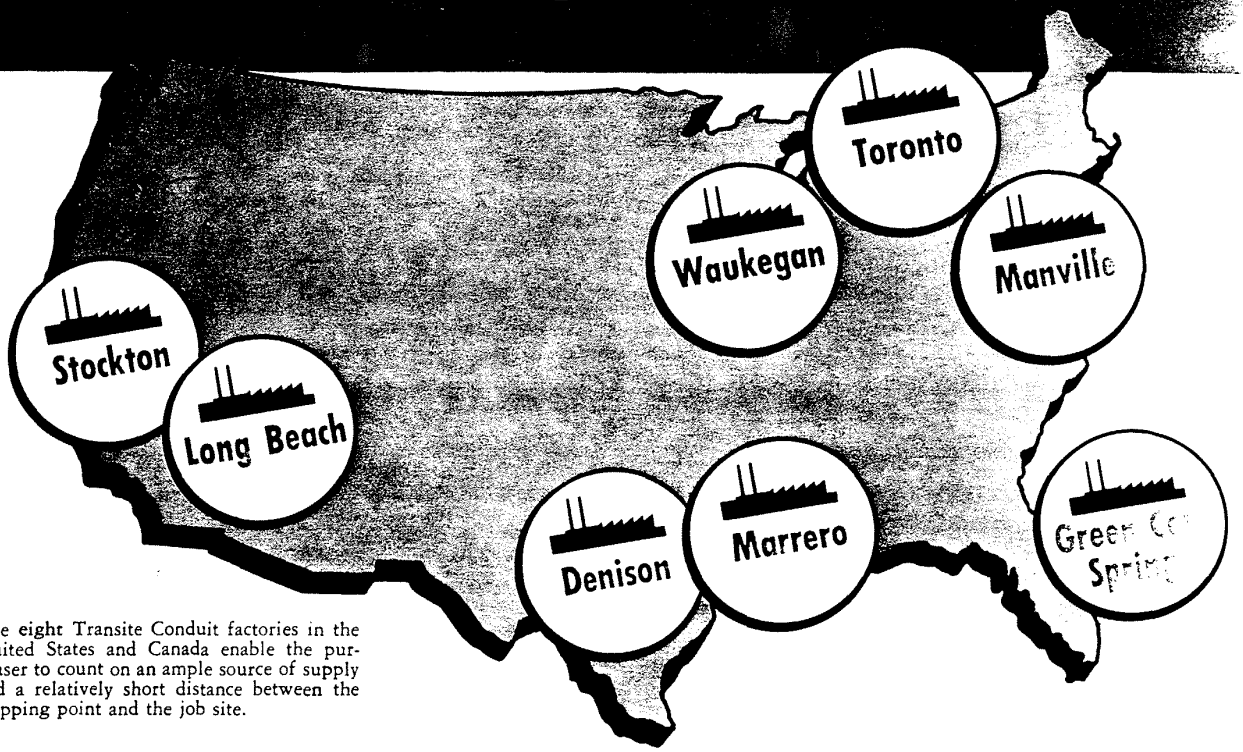
Strength to withstand the usual loadings and temperatures found in duct banks.

WARRANTY

Johns-Manville warrants that our products are manufactured in accordance with the applicable material specifications and are free from defects using our specifications as a standard. The limit of our liability for failure of any of our products to meet the foregoing warranty or for breach of any other warranty, express or implied, shall be to supply an equivalent amount of products for any materials returned to us within 6 months of shipment and found to be defective by us. Due to the widely varying conditions under which our products are used or installed, we offer no warranty, express or implied, as to their length of service life or suitability for any particular purpose. In no event shall we be liable for incidental or consequential damages. No person is authorized to bind us for any further warranty obligation beyond that stated in this paragraph.

CRMC-SBGAB-ConduitPipe-000028

J-M SERVICE includes 8 FACTORIES strategically located to assure prompt delivery of Transite Ducts



The eight Transite Conduit factories in the United States and Canada enable the purchaser to count on an ample source of supply and a relatively short distance between the shipping point and the job site.

Johns-Manville

22 East 40th Street • New York, N. Y. 10016

SALES OFFICES: BOSTON, MASSACHUSETTS • CHICAGO DISTRICT—WAUKEGAN, ILLINOIS • CLEVELAND, OHIO • DALLAS DISTRICT—DENISON, TEXAS • DENVER, COLORADO • JACKSONVILLE DISTRICT—GREEN COVE SPRINGS, FLORIDA • LOS ANGELES DISTRICT—LONG BEACH, CALIFORNIA • NEW ORLEANS DISTRICT—MARRERO, LOUISIANA • NEW YORK DISTRICT—MANVILLE, NEW JERSEY • PHOENIX, ARIZONA RICHMOND, VIRGINIA • SAN FRANCISCO DISTRICT—STOCKTON, CALIFORNIA • SEATTLE, WASHINGTON

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JM

TR-247A 6/69

LITHO IN U.S.A

CRMC-SBGAB-ConduitPipe-000029

AFFIDAVIT

STATE OF COLORADO)
) ss.
COUNTY OF ADAMS)

I, Margaret J. Baumgardner, being of full age and first duly sworn do hereby state:

1. I am not a party to this action. I have personal knowledge of the facts set forth in this affidavit, and if called as a witness, I could and would competently testify as to the truth of the matters set forth herein.

2. I am the Research Coordinator for the Claims Resolution Management Corporation ("CRMC"), a wholly owned subsidiary of the Manville Personal Injury Settlement Trust ("Trust"). The CRMC was created in December 1998 and is staffed by former Trust employees. On January 1, 1999, CRMC began providing claims resolution facility services to the Trust.

3. In this position, I manage the Asbestos Claims Research Facility ("Facility"), a document and records repository located at 3390 Peoria Street, Suite 304, Aurora, Colorado. The Facility contains the business records including but not limited to correspondence, memoranda, reports, records and data compilations ("record") of Manville Corporation or related entities ("Manville"), generally, as well as Manville records relevant to litigation of asbestos liability. The Trust has managed and operated the Facility from November 28, 1988, the date on which the Manville bankruptcy plan was consummated.

4. My experience and familiarity with the documents at the Facility began in 1983 while working for Manville. In my work as a paralegal for Manville, I assisted in locating, indexing and packing many of the records which became the foundation documents for the Facility. I continued to work for Manville until September 1987. From March 1988 to September 1988, I was hired to supervise and assist in the indexing of the first 20,000 boxes which were turned over to the Trust in November 1988. From September 1988 to January 1989, I assisted in the privilege review of documents to be given to the Trust. From November 1988 to April 1994, I worked for Freeborn & Peters and was put in charge of the Facility, managing all productions and "new" acquisitions. In September 1995, I was hired by the Trust to manage the Facility. In December 1998, I was hired by

the CRMC to manage the Facility for the Trust. Accordingly, I am personally familiar with many of the records stored at the Facility, as well as how the records have been gathered.

5. To the best of my knowledge, information and belief, I certify that these records were made at or near the time by, or from information transmitted by, a person with knowledge, were kept in the course of the regularly conducted business activity of Manville, and it was the regular practice and the business activity of Manville to make the records.

6. Attached are documents found among the file and microfilm box collections at the Facility. These documents, bates labeled CRMC-SBGAB-ConduitPipe-000001 through CRMC-SBGAB-ConduitPipe-000092, are true and correct copies of documents found at the Facility.

Margaret J. Baumgardner

Subscribed and sworn to before
me this 16th day of May, 2014.

AMY W BENHAM
NOTARY PUBLIC
STATE OF COLORADO
MY COMMISSION EXPIRES 05-23-2016

Notary Public