

NOVEMBER 1976

the roofing spec

1515 NORTH HARLEM AVENUE • OAK PARK, ILLINOIS 60302 • 383-9513



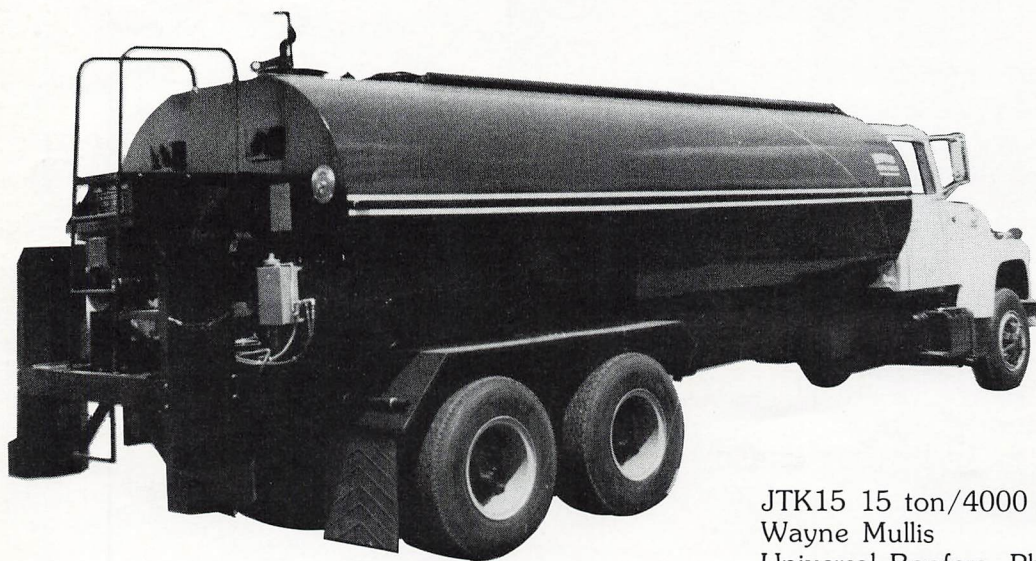
UPDATE: WHAT TO DO LEGALLY WHEN A ROOF FAILS



There Are At Least 12 Good Reasons Why Roofing Contractors Choose



Asphalt Handling Equipment



*We
Get
Involved*

JTK15 15 ton/4000 gallon Capacity Job Tank
Wayne Mullis
Universal Roofers, Phoenix, Arizona

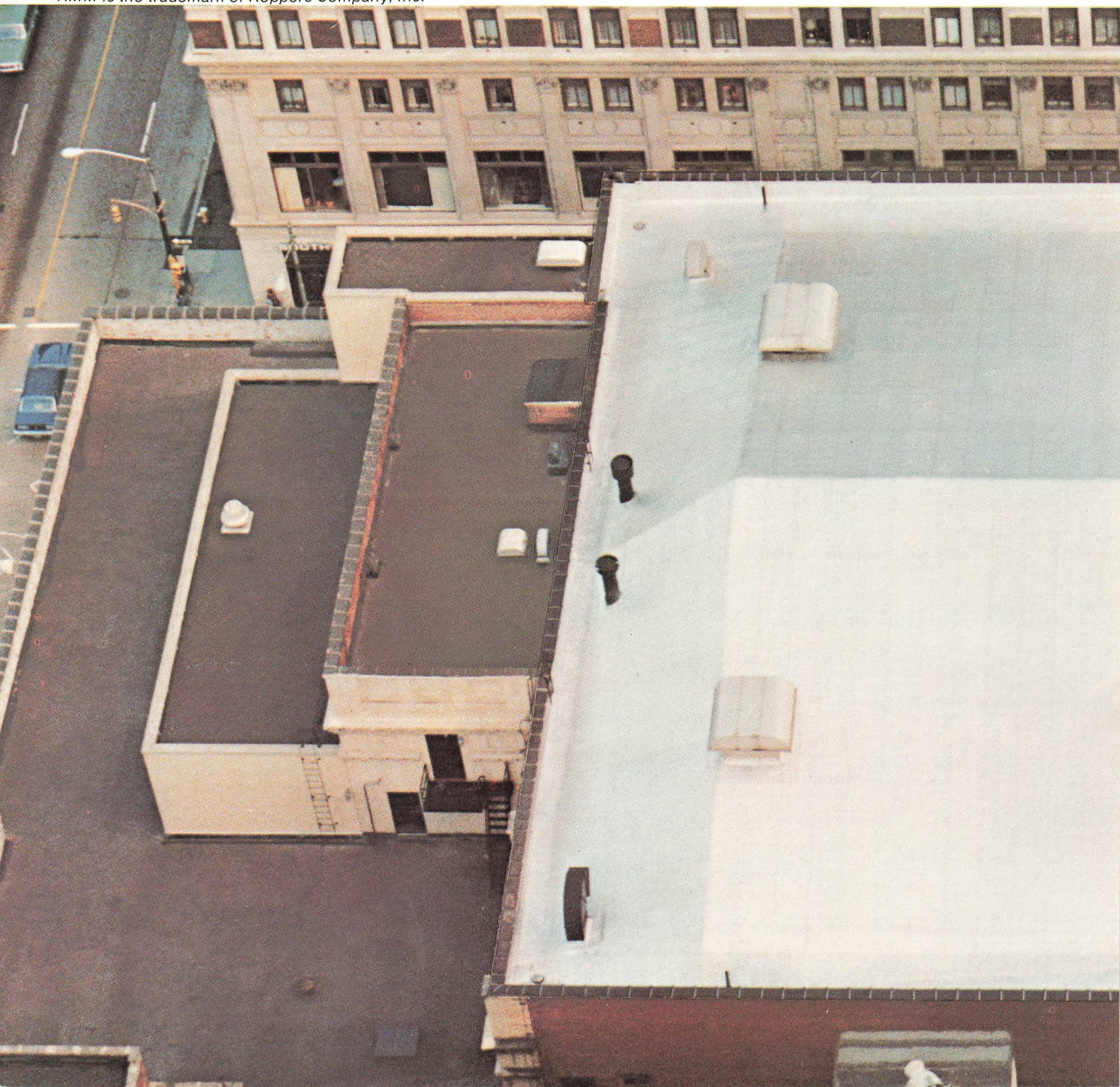
When considering a complete liquid asphalt system or additional pieces of equipment perhaps it would be wise to call or write us for full details.

Liquid Asphalt Systems, Inc., 2435 Jefferson, Kansas City, Missouri 64108 (816) 474-0448

Koppers introduces KMM™ the “triple-belted” roof.

The most revolutionary idea for roofing —
and reroofing —
your business has ever seen.

KMM is the trademark of Koppers Company, Inc.

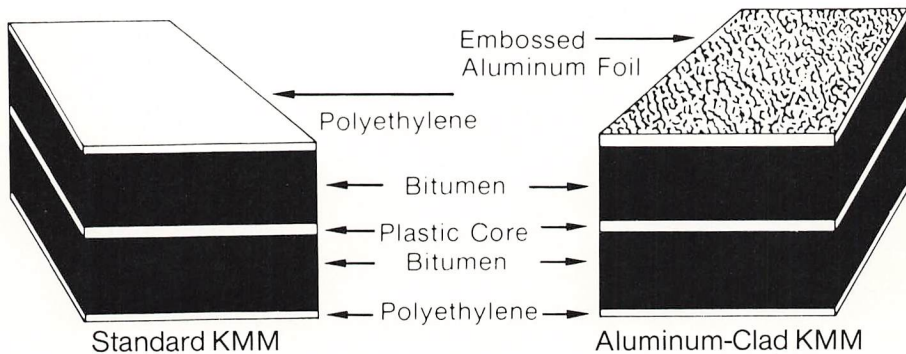


Koppers KMM™ could double

KMM: the "triple-belted" roof. It's twice as fast.

Koppers has just nationally introduced KMM membrane to the U.S. roofing industry. In only a few months, roofing contractors have found this dramatically new roofing concept has changed their business—and it can change yours, too!

Triple-belted KMM multi-purpose membrane is a



factory-made, cold-applied roofing and waterproofing material. It is applied so simply—yet so effectively—your crews can become far

more productive than you thought possible.

In fact, Koppers experi-



...e your income with no increase in

ence to date shows an average application rate of 10 squares/man-day: twice as fast as typical roofer estimating guides for conventional materials!

There are two grades of KMM membrane available. Standard KMM and Aluminum-Clad KMM.

KMM membrane consists of a strong plastic belt, impermeable to water, locked between two belts of bitumen, top and bottom. Standard KMM also has a polyethylene film bonded to the outer surfaces of each bitumen belt.

The bitumen belts protect the tough plastic core during installation and provide the bonding elements for heat fusion between each sheet of KMM membrane.

Aluminum-Clad KMM contains a similar triple-belted body and its top surface is a heavy, embossed aluminum sheet. Aluminum-Clad KMM is recommended for roofs too steep for aggregate surfacing. Or where a smooth surface is especially desirable. The highly reflective surface also provides advantages in the conservation of energy used for cooling a building. Acrylic color coatings are available.

KMM rolls on.

One of the most impressive features of KMM membrane is its quick, easy

installation. It just rolls on! It's so easy, good roofers master the technique on their very first job.



**This new material can change
your roofing business totally
in 24 months. Maybe less!**



Sales tools to spread the word.

Triple-belted KMM roofing systems can bring a dramatic change to your business. They can change the way you, your customers or anyone concerned with the industry thinks about roofing.

Koppers will help bring that about by getting the word out.

Nationwide Koppers sales force calling.

The Koppers sales force will be working with you, of course. In addition, we will take the exciting KMM message to architects, specifiers, building owners and contractors.

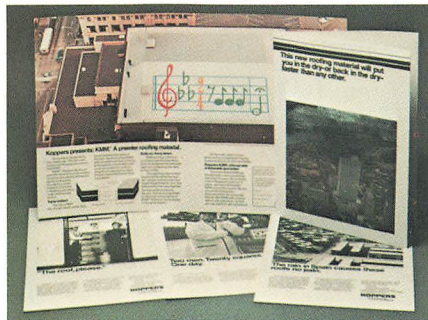
Koppers helps you sell KMM, too!

A variety of sales aids will be made available to you by Koppers. They will help you demonstrate KMM membrane to your customers. Help you close more, more-profitable KMM roofing jobs.

Advertising

Just as you're reading about KMM membrane in this piece, others will get the same KMM story in advertisements in key

building construction and architectural magazines.



Direct Mail

Koppers will tell architects and other key roofing specifiers and buying influences the KMM story with a hard-hitting direct mail program. A program which will lead to direct calls by trained Koppers roofing specialists —and to roofs specified for KMM membrane.

Here's how you can find out more about KMM.

Come to our KMM Seminar.

Koppers is in the process of scheduling regional seminars across the country on the use, economics, estimating, and installation of triple-belted KMM roofing systems.

Those who attend will

get the full KMM story, see action films of its simplicity —and get a "racing-stripe" jacket to remind them how fast, easy and clean KMM membrane can make roofing. If you are interested in having one scheduled in your area, please fill out the coupon and return it promptly.



I want to get started!

Koppers KMM Seminars
1900 Koppers Building
Pittsburgh, PA 15219

Gentlemen:

Please schedule a regional Seminar on KMM™ membrane in my area.

KOPPERS

Architectural and
Construction Materials

Name

Company

Street Address

City

State

Zip

Number of People Employed

Phone

your payroll.

As with any quality job, the first step in roofing with KMM membrane is to get a clean, smooth subsurface. In reroofing, KMM membrane can eliminate the time and expense of "tear off," since it is simply rolled over the properly prepared subsurface. One roll alongside the other, with each roll overlapping the other by four inches. (Aluminum-Clad KMM is applied with KMM™ Adhesive since it receives no aggregate topping.)

All rolls of KMM membrane are 33' long and 43" wide. You can always estimate exactly how much you need to do the job: no guessing on materials needed, no waste.

KMM irons down.

The adjoining rolls, whether Standard or Aluminum-Clad KMM, are then fused together along the overlap using an ordinary torch and a round-nosed trowel. The seal is simple, fast, secure. On Standard KMM, a second, edge seal is made by heating the top of the joint and smoothing the softened bitumen with the trowel.

When a roll runs out, short of the roof perimeter,

you simply cut the additional length you need from another roll. The ends are sealed with the same 4" overlap.

In no time at all, the Standard KMM roof is ready for topping.

Koppers recommends two topping techniques: loosely-spread round, river gravel, or a lighter, bound-aggregate surfacing.

KMM for flashing and waterproofing, too.

Aluminum-Clad KMM is also recommended for use in flashing systems, no matter what conventional roofing material is employed. Aluminum-Clad KMM is installed without having to use hammers and nails.

And Standard KMM has been used successfully as

a waterproofing material on both horizontal and vertical surfaces.

KMM can get you clean, profitable reroofing jobs.

Many quality roofing firms have avoided reroofing: It's been messy, hard to estimate, and even harder to schedule, since owners want minimum "open-time." The arrival of KMM membrane, however, gives you a solution to those problems—and new potential for profit in this reroofing market.

With KMM membrane, there's no "tear-off" of the old roof—no open time! You can estimate better, apply faster, and give the customer a top-quality roof at a good price—and no inconvenience.



“Manufactured roofs” with consistent quality roll after roll, roof after roof.

The overall quality of any roofing job depends largely on the quality of the materials used and the work-

manship of the installation crew. KMM triple-belted roofing is a factory-manufactured material made under strict quality control.

Koppers continuously monitors the quality and uniformity of the materials used in KMM membrane. Each roll meets the same standard. The Koppers standard. And you know Koppers and quality are synonymous!

KMM: a roof you can offer with a renewable guarantee.

While KMM membrane has only recently been introduced nationally, the system has been in use in Europe for 18 years.

And Koppers has subjected it to 5 years of rigorous testing in our own research center in Monroeville, Pa. This was followed by field testing in various locations around the country.

KMM meets Koppers quality standards. Because it does, Koppers is able to make available a five year renewable guarantee on triple-belted KMM roofing systems.



KOPPERS
Pittsburgh, Pennsylvania
Koppers Multipurpose Membrane Roof (KMM)
Roofing Guarantee

Owner: _____ Guarantee No.: _____
Address: _____

Description of Building: _____
Type of Roof Deck: _____
KMM Specification No.: _____
Area of Roof: _____ Lineal Feet of KMM Aluminum Flashing: _____
Roofing Contractor: _____
Address: _____

Date of Completion of Roof: _____

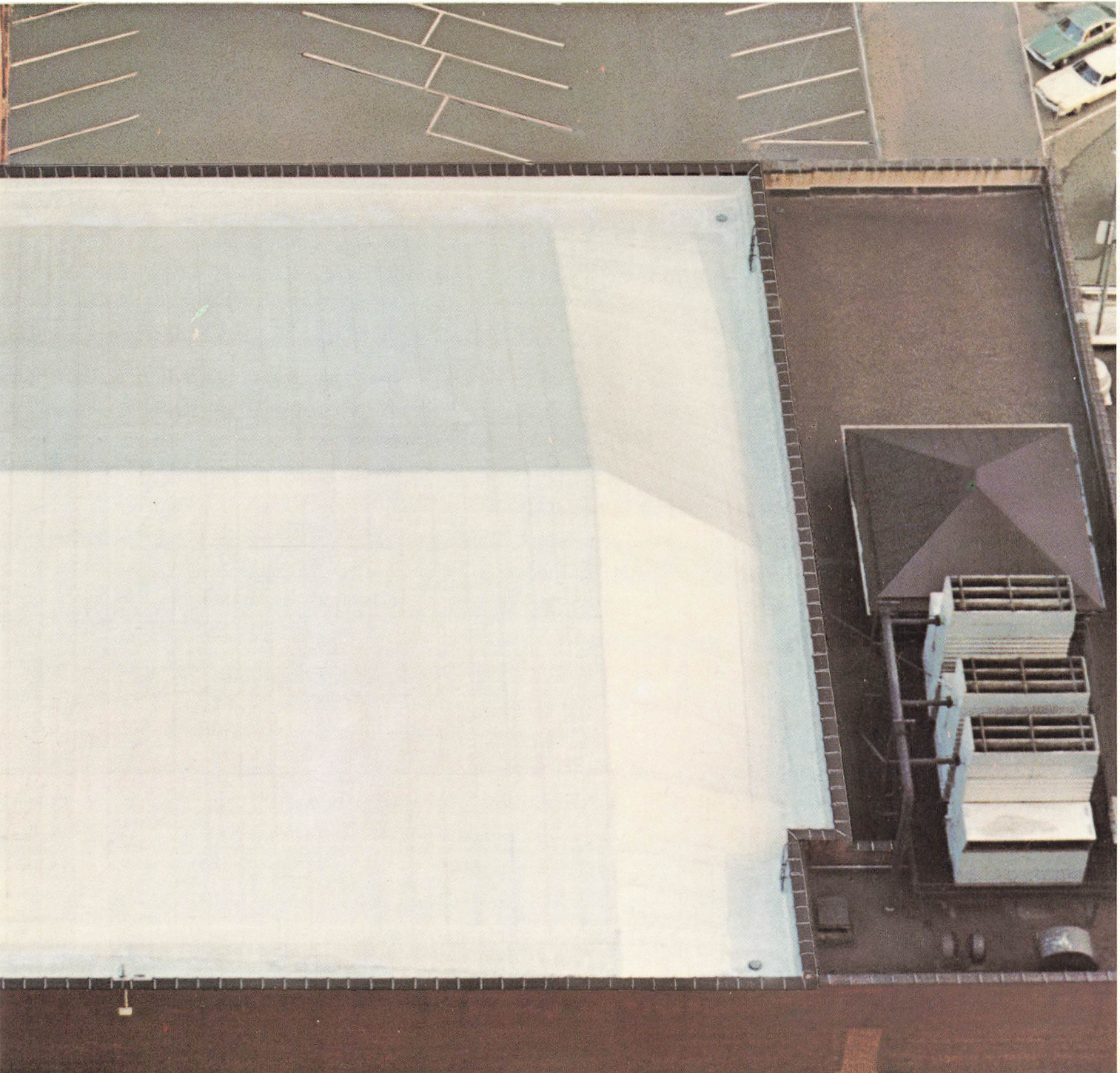
This is to certify that the above described Koppers Multipurpose Membrane Roof System consisting of KMM Membrane and KMM Aluminum flashing, supplied by Koppers Company, Inc. ("Koppers" herein) and installed by the above-indicated roofing contractor is guaranteed by Koppers for a period of 5 years from the above-indicated date of completion not to leak as a result of any of the following causes:

<ol style="list-style-type: none"> 1. Deterioration of any part of the membrane as a result of ordinary wear and tear by the elements. 2. Improper workmanship on the part of the above-indicated roofing contractor in applying the KMM system. 3. Blisters, open laps, fish mouths, wrinkles, 	<ol style="list-style-type: none"> ridges, or splits not occasioned by structural failure of the roof deck or its supporting members. 4. Slippage of any part of the roofing system. 5. Breaks in KMM flashing not occasioned by failure of any metal work or movement of the surface to which the flashing is adhered.
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This guarantee does not cover any failure of the KMM roof membrane, KMM aluminum flashing, or any part thereof as a result of:

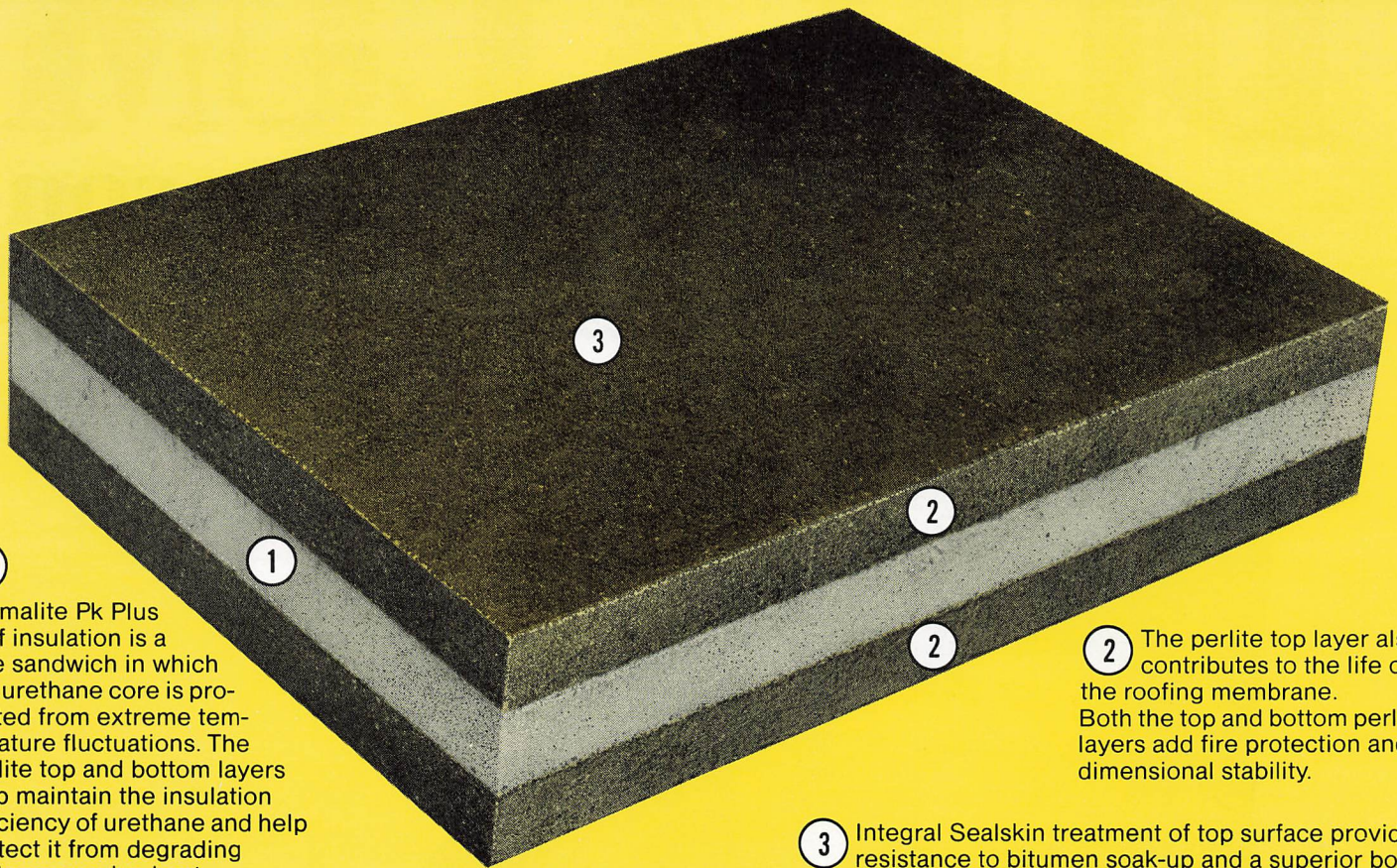
<ol style="list-style-type: none"> 1. Traffic or storage of materials thereon. 2. Settlement, distortion, cracking or failure of the roof deck, coping, walls, structural members or foundation of said building. 	<ol style="list-style-type: none"> through, or around the walls, copings, roof-top hardware or equipment, building structure of underlying or surrounding materials. 5. Lightning, windstorm, hailstorm, floods, hurricanes, or other natural forces.
---	---

Pittsburgh's famed Heinz Hall, "Home" for the performing arts;
its renovated roof, Koppers Aluminum-Clad KMM.



ANNOUNCING PERMALITE® Pk PLUS

...the new, more efficient, long-lasting perlite/urethane/perlite roof insulation from GREFCO



1 Permalite Pk Plus roof insulation is a true sandwich in which the urethane core is protected from extreme temperature fluctuations. The perlite top and bottom layers help maintain the insulation efficiency of urethane and help protect it from degrading under excessive heat.

2 The perlite top layer also contributes to the life of the roofing membrane. Both the top and bottom perlite layers add fire protection and dimensional stability.

3 Integral Sealskin treatment of top surface provides resistance to bitumen soak-up and a superior bond of roofing felts to insulation.

Perlite top and bottom layers protect the urethane core from hot asphalt, built-up heat and linear change.

● Pk Plus is an extension of the proven Permalite Pk board. It adds another layer of perlite to shield the urethane layer from excessive temperature changes and thermal shock. In hot weather and long exposure to full sun, the top perlite layer also acts as a heat sink to help protect the BUR from excessive loss of natural oils and elasticity. It helps keep the urethane warp-free and stress-

free. Asphalt can be applied at normal application temperature.

Permalite Pk Plus comes in four nominal thicknesses consistent with standard lumber sizes and fascia dimensions, with "C" values ranging from .10 to .06. It's easy to cut, fit, lay and adapt to rooftop mechanical services. It contains *no asbestos*.

Send coupon for sample and technical data.

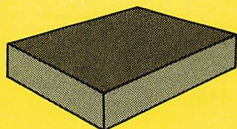
Permalite®

Get all the facts from GREFCO, Inc./Building Products Division, 2111 Enco Drive, Oak Brook, IL 60521 (312) 654-4500



A subsidiary of General Refractories Company

There's a Permalite insulation for every roof!



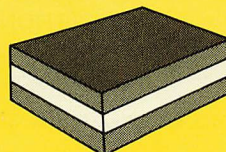
PERMALITE SEALSKIN®



PERMALITE URETHANE



PERMALITE Pk



PERMALITE Pk PLUS

Please send me sample and technical data on Permalite Pk Plus roof insulation to:

Name

Title

Company

Address

City State Zip

Introducing

DURALUM

A strong reason to call



The extra strength you demand in seven architectural colors.

STUDY THE STRONG POINTS.

Duralum is a special alloy of Alcoa aluminum, made especially for IMETCO. Perfect for fascia and mansard panels, copings, standing seam roofs and other architectural uses. And Duralum offers strength you'll appreciate. For example, 20 ga. Duralum has greater bending strength before permanent deformation than 24 ga. steel. Here are some points to remember about IMETCO's Duralum:

- 20-year warranty available against fading, chalking and peeling

- Very lightweight and easy to handle
- Versatility unmatched
- 48" standard width; lengths up to 144"
- Does not rust when cut or punched
- Seven impressive colors to select from
- Smooth or stucco embossed pattern
- Representatives coast-to-coast

TAKE STRONG MEASURES.

Call for a sample and a FREE brochure. You'll find that the extra

strength makes Duralum no less beautiful than other architectural metals available. And the greater versatility you achieve assures you more value for the already low price. IMETCO. Coming on strong in architectural metals. With Duralum.



A division of MM Systems Corp.

1990 TUCKER INDUSTRIAL RD. ● TUCKER, GA. 30084 ● (404) 938-7819 ● CALL TOLL FREE (800) 241-3468

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Volume 4 Number 6 November 1976

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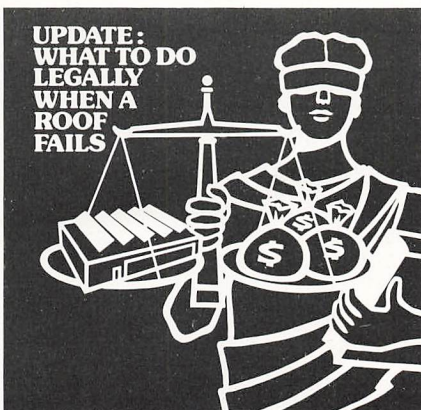
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THE ROOFING SPEC is published bimonthly by the **National Roofing Contractors Association**, 1515 North Harlem Avenue, Oak Park, Illinois 60302. **Annual Subscription Rate** for NRCA members is \$6.00, which is included in Annual Membership Dues. Additional subscriptions for member firms are \$6.00 annually. Non-member subscription is \$12.00 per year. **Second Class Postage** paid at Oak Park, Illinois.

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STAINLESS STEEL • COPPER

REGLETS FOR CONCRETE AND MASONRY

Furnished in
8 and 10 Foot Lengths

SLOT REGLET

With filler and double headed nails.



STAINLESS STEEL

U.S. Gauge	Thickness
30	.012
28	.015

COPPER

Weight Of Copper	Thickness
10 oz.	.0135
16 oz.	.0216

FRICTION REGLET

With notched ends for easy joining.
Double headed nails included.



STAINLESS STEEL

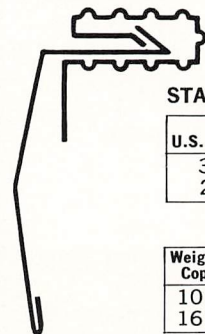
U.S. Gauge	Thickness
30	.012
28	.015

COPPER

Weight Of Copper	Thickness
10 oz.	.0135
16 oz.	.0216

MASONRY FRICTION LOCK REGLET

With notched ends for easy joining.
In 8' lengths with cap flashing insert.



STAINLESS STEEL

U.S. Gauge	Thickness
30	.012
28	.015

COPPER

Weight Of Copper	Thickness
10 oz.	.0135
16 oz.	.0216

QUOTATIONS ON REQUEST, WRITE

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BUILT TO LAST . . . BY GARLOCK

THE PATCHING MACHINES

THE PATCH SCRATCHER

To operate push down on handle

Scrapes 4½" wide

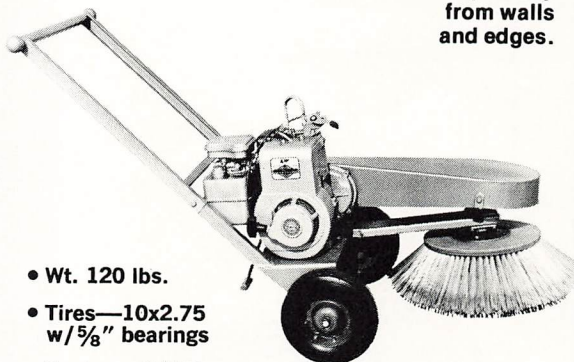
4 H.P. B & S
Wt. 125 lbs.
12 Carbide Pins



Use on repair jobs
expansion joints
gravel stops
roof splits
close to walls.

THE PATCH SWEEPER

Sweeps away from walls and edges.

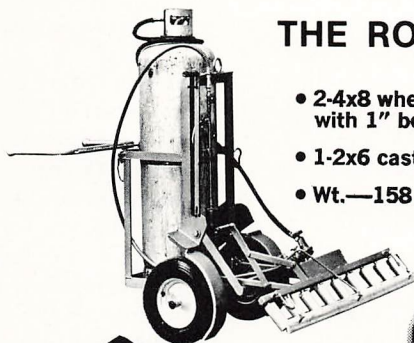


- Wt. 120 lbs.
- Tires—10x2.75 w/5/8" bearings
- Engine—4 H.P.

THE DRYING MACHINES

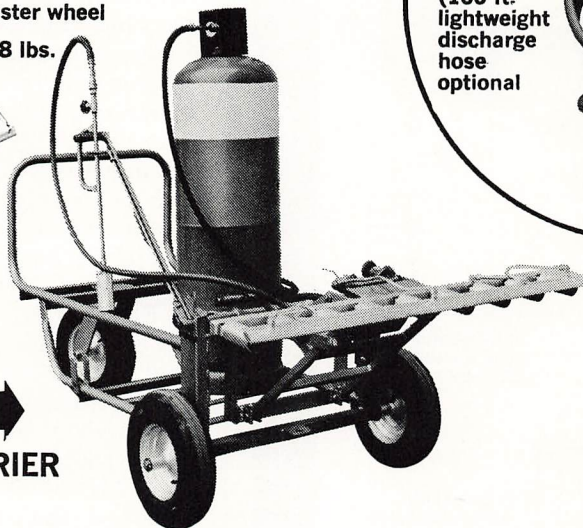
THE ROOF DRYER

- 2-4x8 wheels with 1" bearings
- 1-2x6 caster wheel
- Wt.—158 lbs.



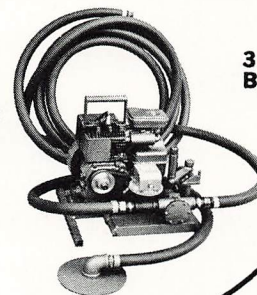
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. . . MOUNTS ON A #4000 UTILITY CARRIER



WATER PUMP WITH A CLUTCH AND AUTOMATIC CUT OFF

Weight 60 lbs.
(100 ft. lightweight discharge hose optional)



3 H.P. B & S

Weight of dryer unit—72 lbs. cylinder not included

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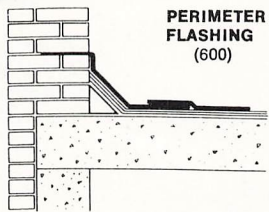
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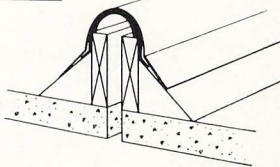
3250 Gorham Avenue So.
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Phone 612-929-0496

UPSTAIRS—DOWNSTAIRS ALL AROUND THE HOUSE NERVASTRAL WATERPROOFS IT!

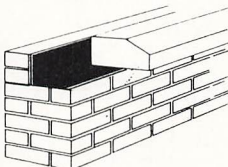
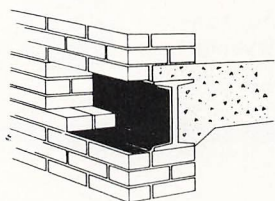
**PERIMETER
FLASHING
(600)**



**NERVA-FLEX
EXPANSION JOINT**

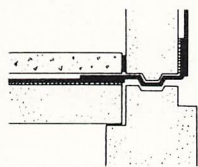
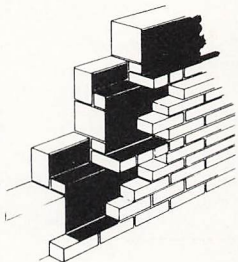


**SPANDREL
FLASHING
(H-D, 300)**

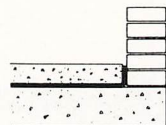


**SILL FLASHING
(H-D, 300)**

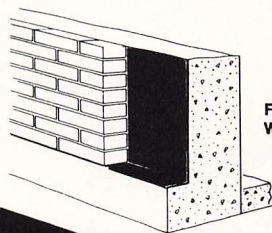
**THRU-WALL
FLASHING
(H-D, 300)**



**NERVASTRAL
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Comment

Between a Rock and a Hard Place

Some applaud it as a result of the public's increasing awareness, making business, at last, own up to its social responsibilities.

Others deplore it as a consequence of a pervasive attitude of permissiveness, with seemingly no end in sight.

It is the unmistakable trend towards solution by litigation. It has resulted in staggering awards for injuries, for negligence, for defective products.

Whatever the causes of this trend -- and there are as many theories as there are lawsuits -- its implications are clear to the roofing contractor. Simply stated, the greatest implication is that a single mistake has the potential of putting any roofing contractor in the country out of business.

Jury awards of \$500,000 or more are no longer out of the ordinary for work-related deaths or disabilities. Six-figure lawsuits for roof failures are not uncommon. And every indication is that the numbers will only go up.

For many businesses, survival, rather than profit, has become the primary objective. Like never before, minimizing risk is the key factor in decision-making.

In this issue, we present two articles intended to help you minimize your risks, and indeed, to survive. The first is the concluding article in a two-part series on Insurance for the Roofing Contractor by Dick Lietz. The second is an updated version on What to do Legally When a Roof Fails, by NRCA counsel McNeill Stokes and Larry McReynolds.

Throughout both articles, two messages come through loud and clear:

First, your potential liability must now be considered objectively as a cost of doing business. Competent attorneys and insurance representatives are absolute essentials.

Second, you must take steps to protect yourself. In the insurance area, this means having your coverages and limits reviewed periodically by knowledgeable people. In the legal area, it means keeping complete and accurate records, documenting changes, and putting every action you take in writing. In both areas, it ultimately means having a safe workplace with adequate quality control.

The disheartening fact of life is that you can no longer afford not to be protected, even though it's difficult to afford the costs of protection. It's been referred to elsewhere as being caught between a rock and a hard place.

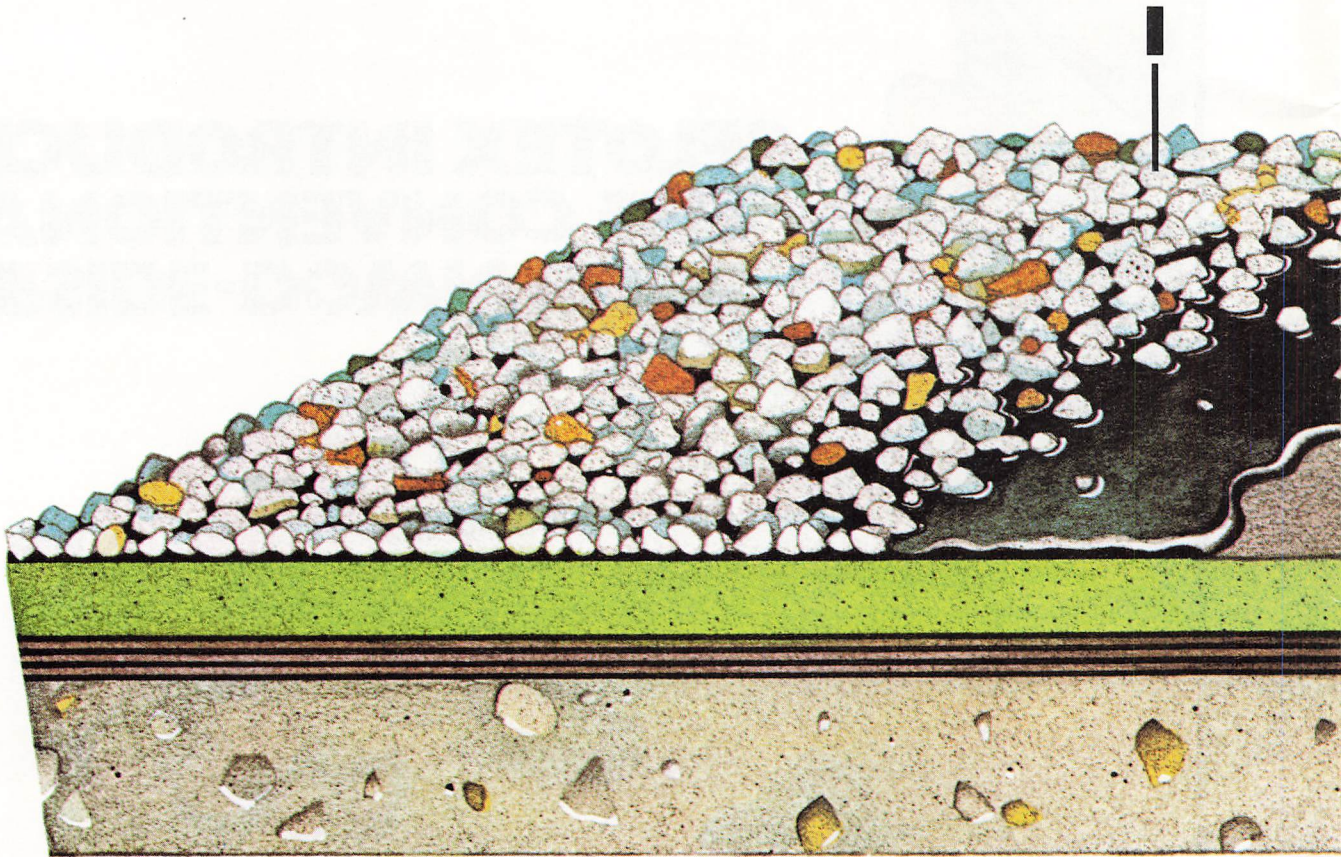




CELOTEX INTRODUCES THE CONVENTIONAL UPSIDE-DOWN ROOF.

THE CELOTEX UPSIDE-DOWN ROOF

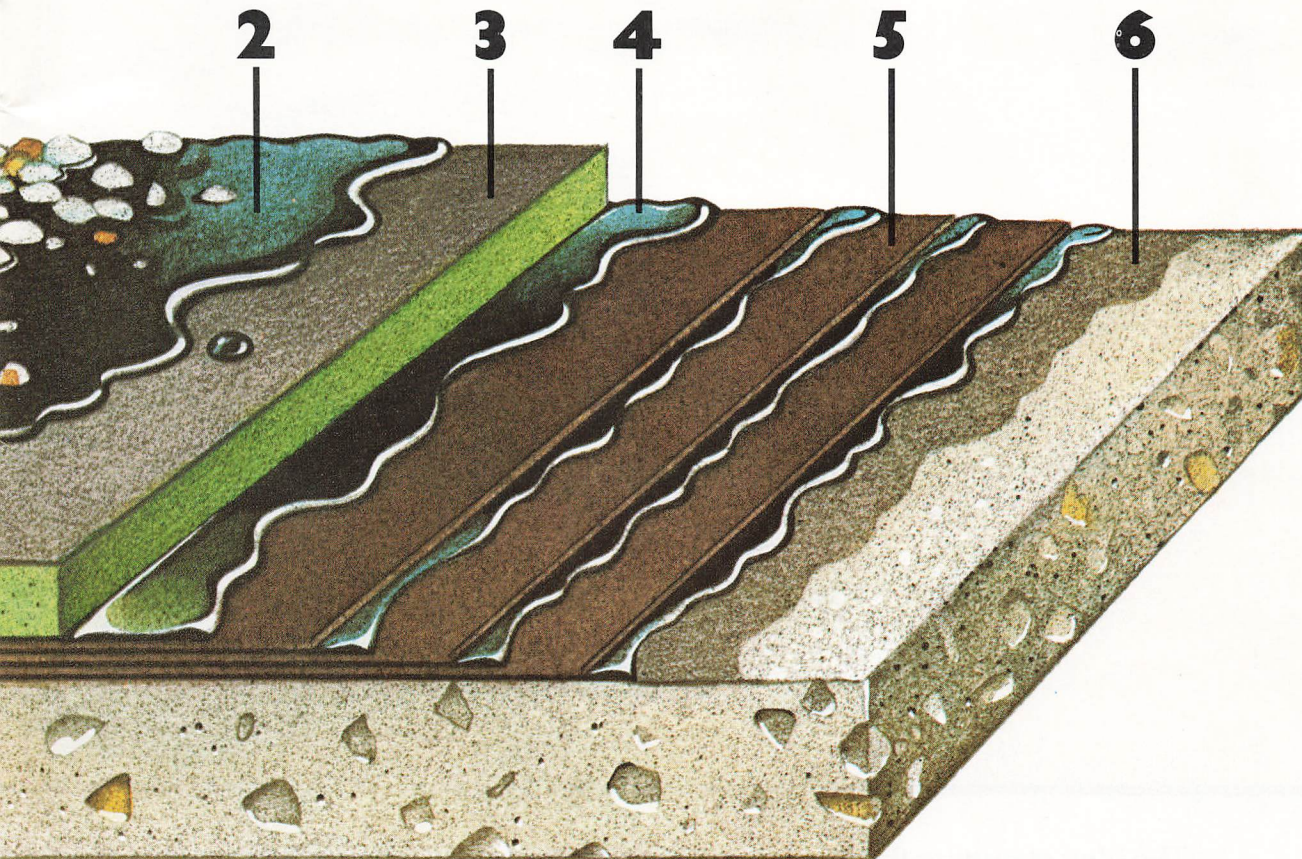
It protects the roof membrane like



- 1** A conventional application of 300 lbs. of slag or 400 lbs. of gravel per 100 sq. ft. protects roof from flaming brands, harmful rays of the sun, and impact damage caused by hail and roof traffic.
- 2** Top pouring of hot asphalt keeps gravel in place and provides first line of protection against moisture.
- 3** New Tempchek® Roof Insulation is what makes the Celotex Inverted Roof Assembly work so well. Other conventional, time-tested Celotex roofing materials are simply combined with it more efficiently. Tempchek Roof Insulation provides thermal protection, dimensional stability and resistance to moisture. It is a closed-cell urethane foam, reinforced with glass fibers and faced with asphalt-saturated roofing felt.

PUTS THE INSULATION ON TOP.

no right side up roof ever could.



- 4** Flood coat of hot asphalt keeps Tempchek insulation in place, and provides the second line of protection against moisture. The asphalt is beneath the insulation, and will not alligator.
- 5** Built-up roofing membrane provides the third and most important line of protection against moisture. Serves as a vapor barrier as well. Roof membrane is protected from thermal shock, punctures and blistering by the Tempchek insulation above.
- 6** Roof deck provides structural support for roofing system. The Celotex Inverted Roof Assembly systems are readily applied to conventional nailable and non-nailable decks. Shown above is a concrete deck, with asphalt primer.

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The idea of putting the insulation on top of the roof is not new. But in practice, it requires a remarkably versatile insulation product. One able to withstand the rigors of weathering and traffic.

New Tempchek Roof Insulation is such a product.

The dimensional stability of Tempchek insulation cannot be matched by other foamed plastic insulations on the market today. Tempchek is stabilized by glass fibers much like concrete is by reinforcing rods.

Tempchek roof insulation is not damaged by hot asphalt applied at normal job temperatures. This relieves roofing mechanics of the responsibility for determining just the right time to bond the insulation without melting it.

There is no need to apply 1,200 lbs. of gravel per 100 sq. ft. on top of the insulation. Tempchek insulation, anchored by hot asphalt, provides uplift resistance of 90 lbs./sq. ft.

Being a closed-cell foam insulation, Tempchek will not absorb water. Insulating efficiency of the Celotex Inverted Roof Assembly is assured. Under

ACROSS THE COUNTRY, AND MICHIGAN'S ICY WINTERS.



normal use, Tempchek Roof Insulation will retain an average 80% of its thermal resistance (R-factor) value.

Before putting the upside-down roof on the market, Celotex tested it. And re-tested it . . . on jobs located across the U.S. From L'Anse, Michigan, to Houston, Texas. From St. Petersburg, Florida, to Dubuque, Iowa. Ask us about them.

Celotex offers a 10-year Inverted Roof Assembly guarantee, a specimen of which will be provided at the place of purchase or upon written request addressed to The Celotex Corporation, 1500 North Dale Mabry Highway, Tampa, Florida 33607.

Your Celotex representative has complete details about the new Inverted Roof Assembly. Or contact John Hasselbach, Commercial Roofing Department, at the above address. A 20-page catalog covering the new system is available now, and will also appear in the 1977 Sweet's Files.

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New Members

The following have been approved for membership in NRCA between August 6 and October 8, 1976.

Alice Roofing & Sheet Metal Works, Inc.
Alice, TX

All Weather Insulating & Roofing Co., Inc.
Midlothian, IL

B.P. & R.J. Charnock
Baltimore, MD

Graham Roofing Inc.
Columbus, MS

Kurtnacker Roofing
Sarasota, FL

Lakeside Roofing Co.
Granite City, IL

Newport Roofing Co.
Newport, TN

Ramig Roofing Co., Inc.
Newark, NJ

Southwestern Contractors, Inc.
Baltimore, MD

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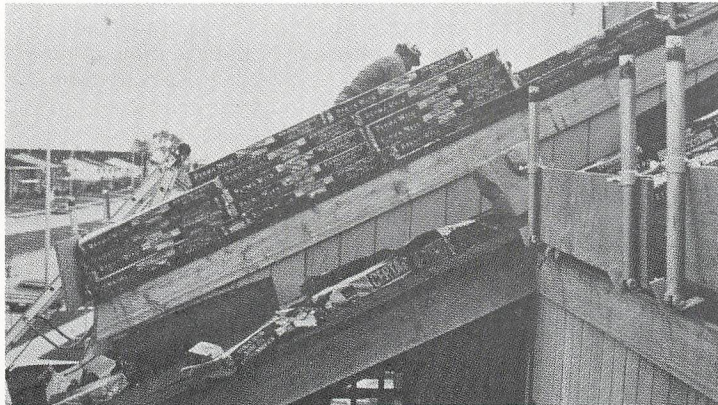
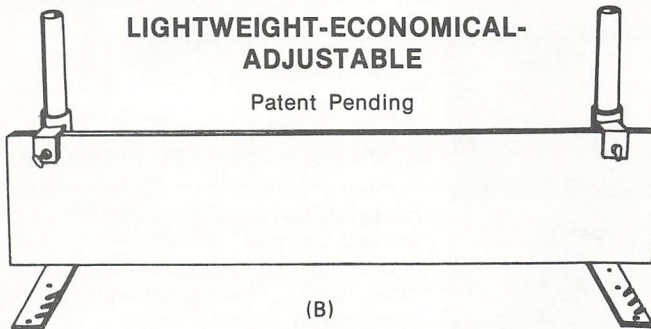
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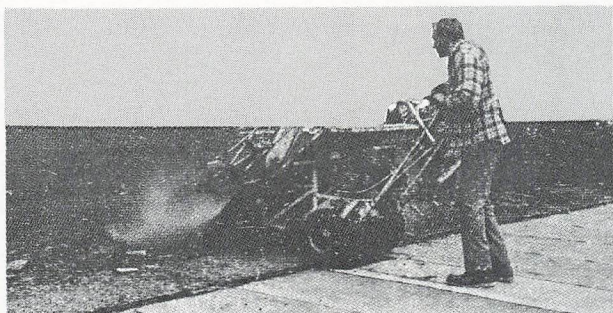


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- Lower receiver will support toe board or can be adjusted to receive up to 22 inch width of plywood. (See Drawing B)
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- Asphalt shingle can be installed over base and when dismantled strike plate and base will release.
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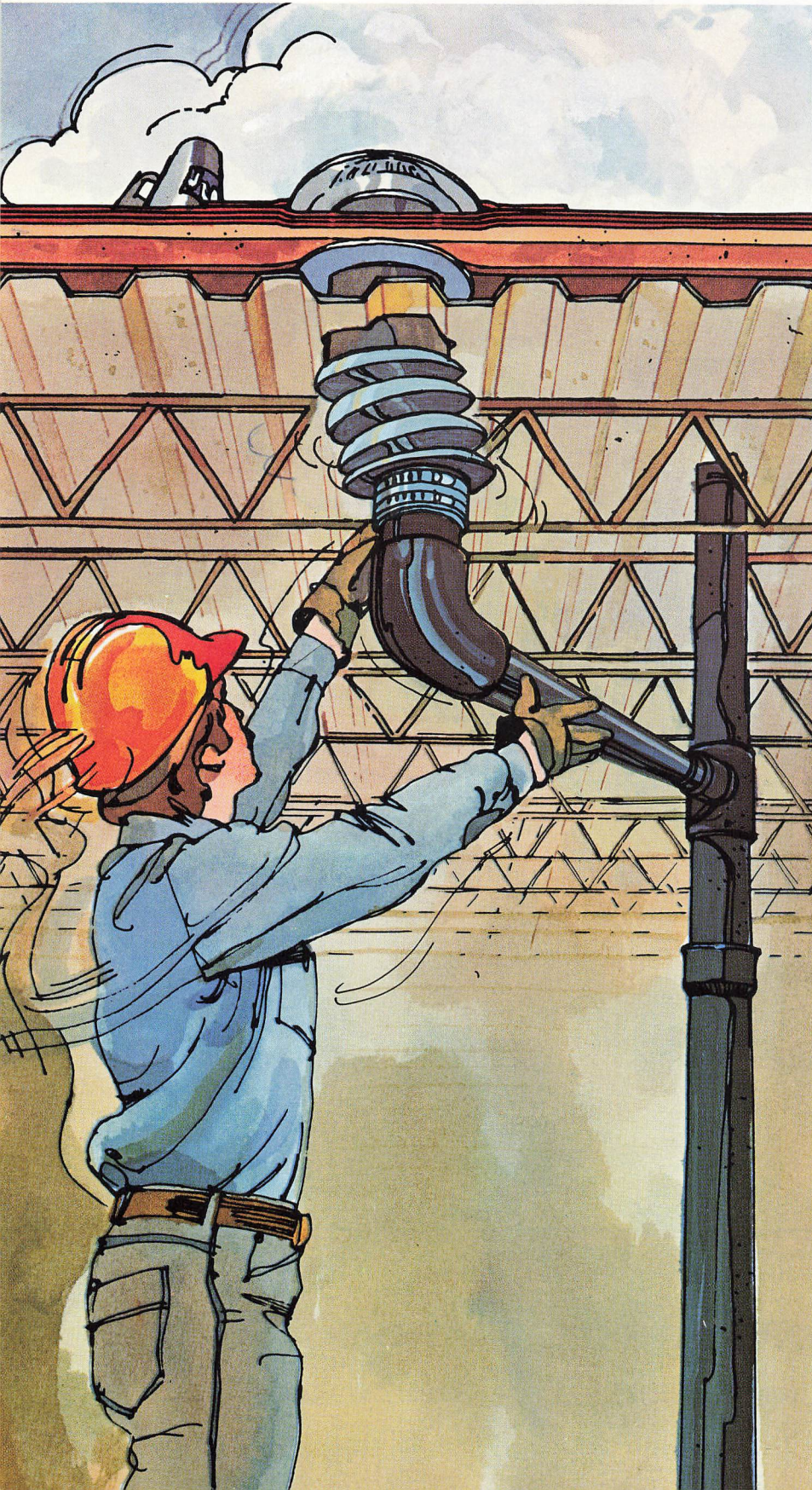
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The easy solution to the problem of relocating drains on reroofing jobs.

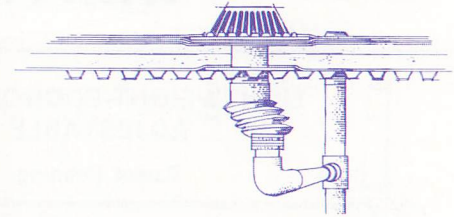


Replacing roof drains on a reroofing job can be a real problem.

Relocating them is often even more of a problem.

But both problems have an easy solution...

Flex-I-Drain, the new, patented flexible drain system from Johns-Manville.



The answer lies in Flex-I-Drain's unique construction—a bellows-type neoprene body that flexes to accommodate "normal" changes in alignment of the new roof drain to existing, rigid drain stacks. That also provides for easy attachment to lateral runs.

This flexibility provides another important function. To compensate for normal pipe and deck movement, both lateral and vertical. So both drain and roofing remain functional.

Flex-I-Drain consists of two basic parts that are easily and quickly installed, adapting to any thickness of insulation and roof membrane up to 3¼". And providing a waterproof insulation that's covered if the Johns-Manville Guaranteed Roof Program is used.

Best of all, Flex-I-Drain is competitively priced. Which means you can offer your client better, longer drain performance while realizing important savings in installation time and labor.

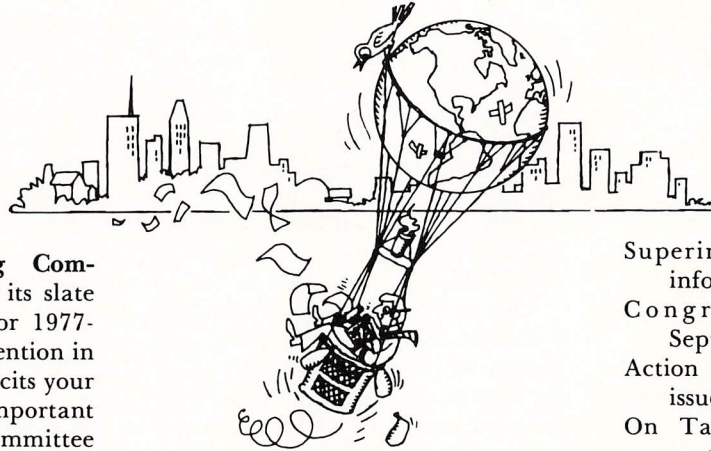
For information about Flex-I-Drain or the J-M single source built-up roofing system, write for BU-319A, Johns-Manville, P.O. Box 5108, Denver, Colorado 80217. Or call Don Korte, 303/770-1000.



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built-up roofing systems.**

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Ideas, notes and random thoughts



The NRCA Nominating Committee is at work preparing its slate of Officers and Directors for 1977-78, to be elected at the Convention in Atlanta. The Committee solicits your help as it undertakes this important task. The Nominating Committee Chairman is Robert Linck, Warren-Ehret-Linck Co., Luzerne & E Streets, Philadelphia, Pa. 19124. Other committee members are Charles Raymond, William Steinmetz, James King, and Ben Hutchinson. Please contact the chairman, committee members, or the NRCA office with your suggestions.

Sweet's Division of McGraw-Hill Information Systems Company reports that it has reproduced a limited supply of its first Sweet's Index -- originally printed in 1906. The Index, with all the original 830 pages and 435 manufacturers' catalogs, is available for \$28.70 from Sweet's Division, McGraw-Hill Information Systems Company, Room 2051, 1221 Avenue of the Americas, New York, N.Y. 10020.

Thanks! It only took the Environmental Protection Agency \$4.2 million to discover that poorly tuned engines generate more pollution than properly tuned engines. By the way, EPA still provides subsidized parking for its employees, as do many other federal agencies. It's a practice EPA does not recommend for other employers. Too many cars in the center of town cause pollution.

And our friends at OSHA have withdrawn their booklet, "Safety with Beef Cattle" after criticism of

such safety gems as, "The best way not to have an accident is to prevent it." The pamphlet also included a warning that manure is slippery. It was part of a series of 60 pamphlets that was to cost \$500,000.

Congratulations to Sam Brasher, newly elected Vice President of the Celotex Corporation. Sam, formerly Product Manager for BUR products in the Commercial Marketing Department, will have responsibility for all the Industrial Department's activities.

The National Bureau of Standards has issued a new report summarizing the work performed during 1975 by NBS' Center for Building Technology. Titled "Building Technology Project Summaries" and designated NBS Special Publication 446, it is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. c13.10:446. The price is \$2.05.

Recent NRCA mailings include:

- Annual Membership Directory
- Revised Roofing Contractors Guide to OSHA
- Call For Papers—Symposium on Roofing Technology
- Convention Registration Forms

- Superintendent's Conference information
- Congressional Review—September issue
- Action Information—October issue
- On Target bulleting & safety poster
- Annual Report

Additional copies of these items are available from the NRCA office.

New Slide Show: We have just completed production of a ten minute, slide and cassette presentation titled "NRCA Today." It describes NRCA's programs and services, as well as our role in the roofing industry and in the business community. The program is designed for showing at local, state, and regional meetings, and is available for that purpose—at no charge—from the NRCA office.

And Finally: The Chamber of Commerce of the United States recently established a Center for Small Business. One of its first questions came from Harold Osterlund of Campbell, Calif. Like many small businessmen, Mr. Osterlund wanted to find out what federal reports a small business is required to file. The Chamber undertook to find the answer. The Small Business Administration was approached first. It suggested the National Archives. Next contact was with the Federal Information Center, then back to an agency in the Commerce Department and—you guessed it—back to the SBA. The Chamber promised Mr. Osterlund to let him know as soon as it tracked down an answer. ☪ ● ● ☪



By
McNeill Stokes
and
Larry S. McReynolds
Stokes & Shapiro
Counsel
National Roofing
Contractors Association

When a roofing contractor experiences recurrent leaks of a similar nature he should be alerted to a possible roofing failure. Roofing experts say that when the total cost of repairing leaks reaches 25% of the initial cost of the roof, a failure has occurred. The roofer may make repairs, only to find that the repaired areas continue to leak. Furthermore, because the defect is usually present throughout the membrane, one repair will be followed by many more in other areas, and the only solution may be to remove the entire roof and install a new roof. The expense of continued repairs may be sufficient to force the roofer into bankruptcy. When a roof fails, it can be the responsibility of the owner and his architect for defective plans and specifications, of the manufacturer and supplier for defective materials, or of the roofer for faulty workmanship. When the roofer carries out his duties under the contract in a good and workmanlike manner, he is usually not legally responsible for a roofing failure.

In any case the roofer is caught in the middle and must prove that his workmanship is not the cause of the roofing failure. For example, if the roof fails prior to final payment the owner may refuse to pay the contractor for his work, contending that the roofing failure was the roofer's fault. In this instance the roofer must show that he complied with his duties under the contract. He may find it necessary to file a court suit to recover the money due him and to use his lack of fault as an affirmative tool to obtain payment.

The issue of fault may also arise as

UPDATE: WHAT TO DO LEGALLY WHEN A ROOF FAILS

(Please refer to *What To Do Legally When a Roof Fails*, *THE ROOFING SPEC*, July, 1974 p. 20.)

a defense in a suit against the roofer. For example, when the roof fails the owner may contend that the roofer's workmanship was faulty and that he should have to pay the costs of repairing or replacing the roof. The roofer must then defend himself by showing that either defective specifications or defective materials caused the failure.

The roofer is always responsible for following the plans and specifications provided, using good workmanship and complying with the customs of his trade. He is not responsible when the method set out for him to follow will not produce the expected result or when the materials he is required to use are inherently faulty. There are several steps a contractor can take to prevent being held liable for roofing failures that are not his fault.

First, the contractor should be aware of what he is obligated to do under his warranty. The guarantee commonly given by the roofer is that the roof will be watertight. At first blush it appears that this guarantee makes the roofing contractor liable for leaks caused by defective specifications or materials as well as those caused by his own faulty workmanship. This is not always the case. Where the work has been performed in good and workmanlike manner, the fact that the roof leaks because of faulty specifications or materials is not the roofer's responsibility.

The case of *McKnight Flintic Stone Co. v. City of New York*, 160 N.Y. 72, 54 N.E. 51 (1894) illustrates this point. There the contractor agreed to furnish all labor and materials and guaranteed that the building basement would be watertight. The method of waterproofing was specified in the contract prepared by the city engineer. Despite compliance by the contractor the basement leaked and the city refused to pay the contractor for his work. The court held that the contractor was entitled to his payment. The court reasoned that the contractor had **not** guaranteed that the specifications would ensure a

watertight basement. The contractor had guaranteed a watertight basement **provided** that the specifications would have produced one in the first place.

The roofer, therefore, may not be required to repair a roof which leaks because the specifications call for a defective method or defective materials, even if he guarantees a specific result. Of course, the roofer should be certain that he does follow the terms of any warranty he does give.

Because the roofing contractor must determine the cause of the failure in order to decide whether he should make repairs, he should take the initiative to investigate any recurrent leaks and he should learn to identify the symptoms of roofing failure as early as possible. Too often a roofing contractor has not taken any action and has allowed owners and architects and roofing manufacturers to engage outside roofing consultants who have incorrectly diagnosed problems as poor workmanship and have therefore fixed liability on the roofing contractor. To protect his own interests, the roofing contractor should not hesitate to call in his own outside expert advice to pinpoint the roofing failures. Such experts may be other knowledgeable contractors, manufacturer's representatives, or roofing consultants who specialize in investigating roofing failures. These experts can prove that the contractor followed the plans and specifications and installed the roof in a good and workmanlike manner. They may also be able to fix the responsibility for the defective roof on the proper parties. The opinion of an outside expert can be invaluable not only in spotting the problem but also in convincing an owner and possibly a judge and jury as to the true cause of the failure.

The task of proving who is at fault when a roof fails is made substantially easier when a roofing contractor arms himself in advance. He should accurately and thoroughly document the progress of his work so

that he can later prove the details of his performance. The roofer should be particularly careful to document all changes in specifications and materials and should be legally prepared to prove that the owner or his architect approved all changes. The roofer should, in particular, avoid taking any part in designing the roof. For example, the roofer should refrain from making suggestions for substituting certain materials for others. Such responsibility, no matter how slight, may later lead to liability for a defectively designed roof. Photographs, samples, and tests are invaluable in proving the roofer's good workmanship and should be taken as the work progresses. The roofer should anticipate that such proof may later be needed.

Just as it is never too early to seek the advice of an expert to determine the cause of roofing failure, it is never too early to consult with an attorney. Time may be crucial in securing the roofer's legal rights, and he should not wait until he is sued to consult with his attorney. One major hazard of delaying this step is the statute of limitations. This statute, which varies from state to state and

according to the legal theory applied, sets a time limit after which an issue will not be considered by the court. To prevent prejudicing his own rights the contractor should not assume that he has plenty of time to file suit or to raise the issue and should not delay contacting his attorney until the day before his time expires. The consequences may be drastic.

In addition to obtaining immediate expert and legal advice the roofer must take quick action to notify his completed operations insurer when internal damages occur as a result of the roofing failure. Most policies state that the roofer is required to notify the insurance carrier within a certain stated time limit. If the roofer delays beyond that limit, the insurer may be relieved of his obligation under the insurance contract. If the roofer complies with his duties under the insurance contract, however, he is entitled to the protection offered by the policy.

The roofer should be aware of the limitations on the protection which his policy does extend. The insurance company is not obligated to defend

the roofer's workmanship, even in a suit under the policy. Completed operations carriers are primarily interested in protecting the interests of the insurance company by minimizing the internal damage liability. Although the issue of the roofer's workmanship may very well be settled in the course of litigating the internal damage liability, the roofer cannot depend on it. The insurance company will not litigate this issue if they do not have to. In addition, they may settle out of court and the roofing contractor will have to provide his own defense to the question of his liability for repairs or replacement of the roof. Because the roofing contractor cannot predict whether the insurance company will ultimately present this issue to the court, he is well advised to obtain his own attorney to represent him in addition to the counsel provided by the insurance company.

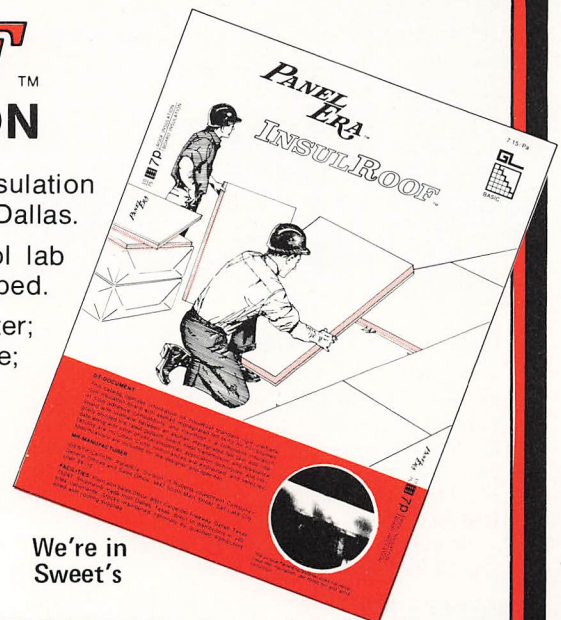
There have been numerous cases throughout the country during the past several years as the result of roofing failures due to material defects or the owner's defective specification. These cases are illustrative of the types of legal

[continued]

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WHEN A ROOF FAILS

problems roofers encounter when a roof failure occurs. It should be noted that in every case, substantial repairs were made to each roof before litigation resulted. In most cases the roofer was called upon under the warranty to make initial corrections and repairs to the roof.

In *Goslee Roofing & Sheet Metal, Inc. v. Certain-Teed Products Corp.* [Cir. Ct. for Talbot Co., Md.], the specifications called for four-ply membrane. At the suggestion of and in reliance on warranties made by the manufacturers, the architect approved a substitution of Certain-Teed's Dual 80 GSI two-ply system to be used with Dow's Styrofoam RM insulation. When the roofs began to leak, Goslee, the roofing contractor, first attempted to repair them; but they continued to leak in the same places, so Goslee reroofed all five buildings. Goslee then sued both manufacturers as well as the general contractor and the architect for damage to cover the cost of reroofing together with certain consequential damages. The court found that Goslee's workmanship was "at least average" and was not a cause of the roofing failure.

By contrast, the court held that because "Styrofoam RM was not even fit for the ordinary purposes for which it was used in the trade, to wit: as a substrate for any built-up roofing system," Dow breached its implied warranty of merchantability (under the UCC). In addition, the court found that Certain-Teed's two-ply roofing system was "clearly too weak for any roof that must qualify for a 20-year bond, and that inherent weakness, acting in concert with the movement of the substrate, was a proximate or contributing cause of subject roof failure." Thus, the court held that the roofer who had reroofed the five buildings was entitled to recover damages "as a result of the wrong doing of Dow and Certain-Teed" totalling \$73,204.34.

In *Independent School District No. 181 v. The Celotex Corp.* [9th Judicial Dist., Crow Wing Co., Minn., affirmed, Minn. Sup. Ct., July 9, 1976], the owner sued the roofer and the manufacturer of Barrett "Bond Ply" two-ply roofing system to recover the expenses of repairing and eventually reroofing the defective roof. The roofer's work was found to be satisfactory, and the

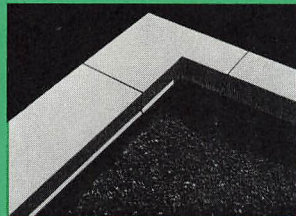
manufacturer was held liable for costs because it had produced a defective product. Celotex had advertised its product as assuring "greater quality, weather protection and long life than ever before possible." Celotex, however, was aware, and the court found, that Bond Ply suffered from "moisture problems, reduced tensile strength and extreme vulnerability to temperature extremes." Because of its "obvious misrepresentation" in its 1+1=4 advertising, Celotex was held responsible. On appeal from the Order denying a new trial the court noted that "(t)he origin of (the moisture in the plies) is the single relevant factual determination in assigning liability between Celotex and Thelen (the roofer)." The jury's verdict of \$150,000.00 against Celotex alone was affirmed and Thelen was exonerated.

In *Board of Mental Retardation v. Philip Carey Corp.* [Cir. Ct. of Pulaski Co., Ark., Nov. 16, 1971], the owner sued the roofer and the manufacturer for the costs of repairs and reroofing. The architect had rewritten the specifications, which called for Barrett Bond Ply (No. 220-

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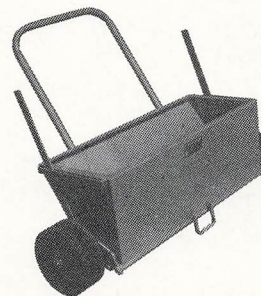
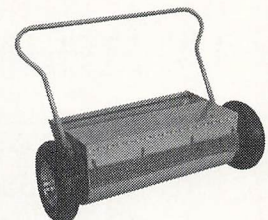
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P-INS), to require the competing Philip Carey two-ply product. Extensive repairs to the completed roof did not solve the leaking problem, and the roofs had to be replaced. The court found that the failure was caused by the "inherently weak and defective roofing system produced by defendant Carey," which placed its product on the market "without adequate testing and field research." Carey was held liable for \$31,893.74 as costs of replacement and repairing water damage to the interior of the buildings at one location, and \$130,385.00 for damages at another location. The contractor was absolved of responsibility because he had not recommended the two-ply system and because he installed the roof in accordance with the contract and under the supervision of the manufacturer's representative.

A case which is somewhat different is *Westinghouse Corp. v. Rentenbach Engineering Co. [Ct. App. Tenn. 1976]*. In this case the owner, and not the manufacturer, was held responsible for the defective materials. The legal theory applied is that the owner's specifications were themselves defective by calling for a

defective product. The architect had approved the substitution of a 220 INS Series Barrett roof for the 120 Series called for in the specifications in reliance on assurances made by the manufacturer of the high quality of this product. The roofing contractor, Tri-State Roofing Company, extended a five-year warranty for repair work similarly relying on the manufacturer's warranty. The roof leaked profusely, and Tri-State continually repaired the leaks throughout the five-year period. When the warranty expired, Westinghouse replaced the roof and sued Rentenbach, the general contractor, who in turn sued Tri-State for defective installation of the roof. The court found that Tri-State had properly installed the roof and that neither Tri-State nor Rentenbach should have to pay for the new roof because Westinghouse and its architect, misled by the manufacturer's assurances, "chose the wrong type of roof." The judge concluded that "the 220 Series roof was inherently defective and would never suffice as roofing if one desired the interior of a building to remain dry." (See **Special Report**, THE

ROOFING SPEC, July 1976, p. 9 for the text of the opinion.)

The roofing contractor faced with lawsuits such as these can and should take affirmative steps to obtain a successful outcome. It is even more desirable to avoid a lawsuit altogether. To protect himself from liability for roofing failure attributable to defective specifications or materials, the roofing contractor should take the following preventative steps:

- (1) Perform the duties under the contract in a good and workmanlike manner; and
- (2) Document the performance of the contractual duties, including the appropriate approval of all changes in specifications and materials.

When roofing problems occur, the roofer must:

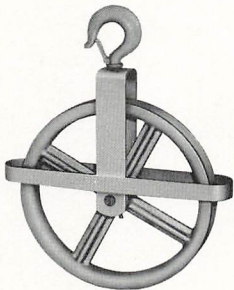
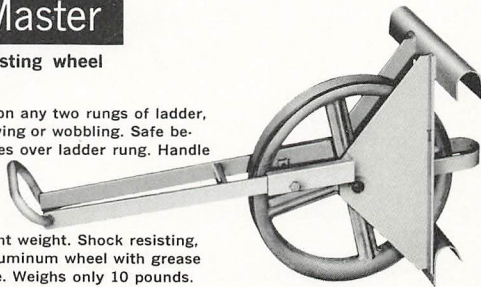
- (1) Recognize the existence of a roofing failure early;
- (2) Seek expert and legal advice immediately; and
- (3) Advise the completed operations insurer when internal damages result.

Taking these steps is the least a roofing contractor can do to protect his legal rights. ● ● ●

Ladder Master

Ladder-mounted hoisting wheel that stays in place

Ladder Master mounts on any two rungs of ladder, stays in place—no swaying or wobbling. Safe because rope always passes over ladder rung. Handle is 24" from ladder mounting point which means extra 12" clearance for bigger, bulkier lifts. Strong. Light weight. Shock resisting, dual ball bearing 12" aluminum wheel with grease fitting, in all steel frame. Weighs only 10 pounds.



Hoisting Wheel WITH SAFETY CLIP

Light weight 12" aluminum wheel with dual ball bearings and grease fitting in all-steel frame. Heavy duty forged swivel hook with safety clip. Light weight for greater ease and safety when reaching over firewall to hang wheel on A-frame. Weighs only 7 3/4 pounds.



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(800) 421-6174 (except Calif., Alaska, Hawaii)

YOU NAME IT, WE'VE GOT IT!

We can deliver the goods—with the service and quality to fit the job.

- Aluminum architectural sheet—gauges .025 to .125 in stock.
- Anodized—two sides.
- Duranodic—medium and dark bronze.
- Fluorocarbon—dark bronze—one side, finished two sides—medium/dark bronze, black/white, dark/dark (one inventory covers two items).
- Fabrication—We supply custom mansard systems, fascia, sills, and column covers. We form, shear, punch, drill, and weld.
- Extrusions—Over 7500 dies available for gravel stops, copings, angles, bars, tubes, channels and tees. Custom shapes to order, finished and cut to your specifications.

Immediate service from stock, prompt expediting of special orders.

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ALUMINUM CORP.
(312) 671-2510
Specialists in Quality and Service
3825 Willow St., Schiller Park, Ill. 60676

THE NRCA MEMBERSHIP COMMITTEE ANNOUNCES THE 1976 MEMBERSHIP CONTEST

You can help NRCA reach its next plateau—1500 members—by the time of the Convention in Atlanta. And you'll be rewarded for your efforts.

Sign up 5 new members between now and February 1, and we'll give you a free hotel room for 2 during the Convention (5 nights, single or double, at the Hilton or Marriott).

Sign up 10 new members and we'll give you the same hotel room **plus** complete registration packages for two.

And, if you sign up 20 members, you'll be our guest at the Reconvened Convention to Monte Carlo. (Package for 2, including air fare, hotel accomodations, and many social functions.)

The rules are simple and straight forward:

1. Anyone is eligible to compete.
2. Applications along with a check for first year's dues must be received in the NRCA office between August 1, 1976 and February 1, 1977.
3. Applications must be approved by the NRCA Board of Directors or Executive Committee and must include the name of the sponsor.

There's more, though, because three new categories of membership have been approved within the new Industrial/Institutional category of membership. All memberships in this category are for individuals, and do not carry the right to vote, or to serve on the Board. These are:

1. School Boards, Colleges and Universities—Annual dues are \$200 the first year, \$100 per year thereafter.
2. City-county-state government officials—Annual dues are \$200 the first year, \$100 per year thereafter.
3. Corporate "consumers", i.e., those with maintenance departments interested in roofing. Annual dues—\$500 per year, or \$1000 per year if they perform their own major roofing work.

Applications for these new categories are presently being prepared and will be available soon.

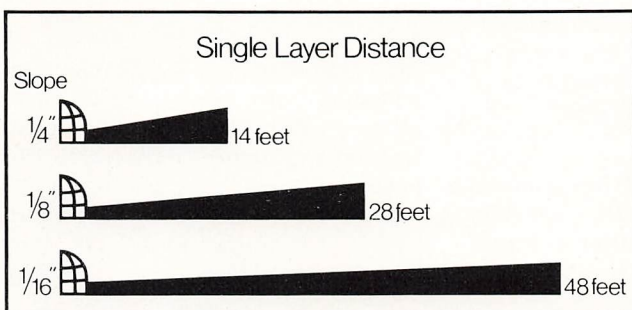
As always, the NRCA office stands ready to assist you in your recruiting efforts. We'll provide you with prospects in your area, write follow-up letters, send out sample literature, anything to help you win a prize.

Good Luck!



Install the new Tapered III FOAMGLAS® Roof Insulation System with less labor and underlayment costs.

Now Pittsburgh Corning offers an insulation system for roofs that cuts installation time and reduces underlayment — our new Tapered III FOAMGLAS® Roof Insulation System. The Tapered III System delivers positive drainage with a choice of three slopes: one-sixteenth inch per foot, one-eighth inch per foot, and one-fourth inch per foot with distances of 48, 28, and 14 feet, respectively, before underlayment is needed. These add up to an impressive savings on labor costs.



The Tapered III System arrives on the job-site shrink-wrapped and alphabetically and color coded for easy identification. Each tapered FOAMGLAS block is clearly marked according to its row and direction of slope to simplify installation. The Tapered III System is installed using conventional roofing methods and equipment.

FOAMGLAS Insulation, the heart of the Tapered III System, offers a firm, dimensionally stable base for built-up roofing. It's impermeable to moisture and noncombustible. FOAMGLAS Insulation is the only roofing insulation on the market that's guaranteed for 20 years against loss of thermal efficiency.

For more complete and detailed information on the Tapered III FOAMGLAS Roof Insulation System, write Pittsburgh Corning Corporation, Dept. N-116, 800 Presque Isle Drive, Pittsburgh, Pa. 15239.



News from associate members

John Lohman, General Manager of the **Blackwell Burner Co.**, announced that the company is planning to break ground for a new 70,000 sq. ft. manufacturing facility on nine acres of land in San Antonio, Texas, which will double the firm's capacity to produce its line of construction equipment.

The new plant will start shipping equipment to customers in January, 1977 and will be in full production by next March. The firm is planning an open house for customers during the spring of 1977.

Mr. Lohman further stated that Blackwell is planning to expand its line of roofing equipment as well as expand the geographical area that the firm normally ships to.

An "upside down" inverted roofing system was introduced recently by the **Celotex** building materials division of Jim Walter Corporation. Key to the new system is Tempchek, a glass reinforced urethane core roofing insulation board. Tempchek is a proprietary product developed by Jim Walter Research Corp. Patent applications have been filed for it.

Celotex reports that in research center tests, Tempchek averaged less than one per cent dimensional change after 28 days exposure at 158° F. and 95 to 100 per cent relative humidity. Celotex also guarantees that Tempchek when applied as specified will retain an average of 80 percent of its thermal resistance value.

Inverted Roofing Assembly membrane temperature variations were calculated by Celotex to be within a range of 16.5° F. versus a range of 130° F. in conventional systems in which the insulation is under the roofing membrane. The temperature ranges were determined under identical test conditions in which the roof top surface temperature was 140° in the Summer, zero degrees in Winter and inside building temperature of 80° year round was maintained.

Inverted roofing specifications for wood, concrete and steel decks and

the application of various roofing felts in the system are described in a 20-page manual.

When the Inverted Roofing Assembly is applied on steel decks with an underlayment of one-half inch thick fire-rated Type-X gypsum board, the system qualifies for Factory Mutual Class I-90 fire rating with 90-pound wind uplift resistance as well as Underwriters Laboratories, Inc. Construction No. 99. Inverted Roofing Assemblies also have Underwriters Laboratories listing service for Class-A roof covering materials.

Celotex offers the building owner a ten-year guarantee covering the system when installed by a Celotex-approved contractor using Celotex materials and applied according to specifications.

Remi L. Wrona has been named Director of Marketing for **Contech Inc.**'s International Division. Wrona will be directly responsible for all international activities and the development of the European, Middle Eastern and Canadian markets. Born in France, Remi received a Mechanical Engineering and Canadian markets. Born in France, Remi received a Mechanical degree from the University of Nancy, Nancy France and is a linguist.

The **Gibson-Homans** Company has received the Product Feature Award for its Handi-Patch Roof and Gutter Sealing Tape from **Popular Mechanics** magazine. In accepting the award, Ed Hull, Vice President Sales for Gibson-Homans said:

"Consumer acceptance of Handi-Patch Tape has, and continues to be high. Now that it carries the Popular Mechanics Product Feature, I feel it will be even stronger in the do-it-yourself market."

Permalite-Pk-Plus roof insulation is new from **GREFCO, Inc.** According to GREFCO, the insulation is a true sandwich in which the top and

bottom layers are dimensionally stable, fire-resistant perlite and the core is highly efficient urethane. Four nominal thicknesses consistent with standard lumber sizes and fascia dimensions with "C" values ranging from .10 to .06 are offered.

MM Systems Corporation, manufacturer of aluminum specialty architectural and fascia systems, announces the formation of their new subsidiary, IMETCO Division. Julian Attaway, president of MM Systems, in making the announcement, described IMETCO as being "the exclusive marketer of Duralum, the latest in pre-finished architectural metal sheets." Consisting of a special alloy aluminum developed by Alcoa, Duralum is well suited for copings, mansard and fascia panels, batten and standing seam roofs, gravel stops, wall caps and numerous other architectural applications. IMETCO offers Duralum sheets in seven colors with a 20-year warranty against fading and chalking.

IMETCO operations are located in Tucker, Georgia. According to Attaway, distribution will be through area representatives in almost every major city in the United States.

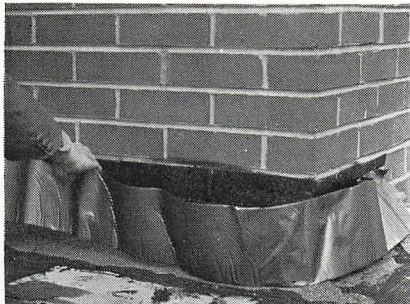
Peterson Aluminum Corporation has received the distributorship for a new Multi-Purpose Ladder. The ladders are 12' or 16' in length; the 12' ladder can be folded to require only 6 cubic feet for storage. In addition, the ladders maneuver into a variety of working positions. More information is available from Peterson at 3825 N. Willow St., Schiller Park, IL 60176.

The Roofing and Contractors Equipment Co. (RACE), 330 Meyer Rd., Bensenville, IL 60106, has announced the availability of their all-new Roof-Peeler. The unit features a hardened, replaceable 10" blade and two 8" steel wheels. RACE reports they can make shipments within 24 hours, and have free literature available. ● ● ●

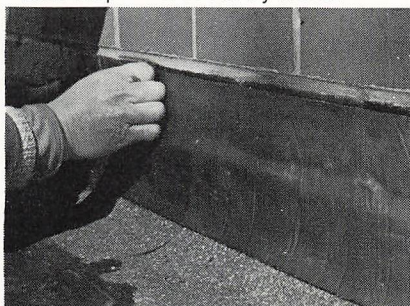
This flashing installs in half the time at half the cost —with no call-backs!



No need to form reglets.



Last step — smooth by hand.



FLASHBAND® is roll aluminum with an asphalt-based pressure-sensitive adhesive. Comes in bright aluminum or grey finish.

- 1. Versatile.** Flashband seals chimneys, vent stacks, bases, eaves, walls, roof drains, counter flashings, gutters, ridges, curbs, valleys, fascias, coping, roof drains, construction joints.
- 2. Easy to use.** No special tools. Just cut to size, peel off release paper, position, and smooth down by hand.
- 3. Eliminates normal flashing steps.** No need to form reglets, chisel mortar, or repoint! To install over concrete or masonry, merely prepare surface first with an asphalt primer.
- 4. Bonds** to virtually any surface with an immediate, sure, and watertight grip that grows stronger with time.
- 5. Economical . . .** you save 50% or more in material cost and labor time over conventional flashing.

SIZES		
20 ft. roll In Bright Finish only	33 ft. roll In Bright or Grey Finish	
2 in. wide	2 in. wide	9 in. wide
3 in. wide	3 in. wide	12 in. wide
6 in. wide	4 in. wide	18 in. wide
9 in. wide	6 in. wide	24 in. wide

6. Durable. Certified to withstand rain, wind, snow, extremes of heat and cold.

FLASHBAND — the modern, economic way to flash, seal, repair.

Use Service Card for free product data sheets.



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JOHN D. ENNIS

NRCA Past President John Ennis, of Guaranteed Roofing Co. in Terre Haute, Indiana, passed away on October 9 after a brief illness. Mr. Ennis, who served as President in 1954 and 1955, was an Indiana state representative at the time of his death. He was also active in the Kiwanis Club, Elks Lodge, YMCA and Boy Scouts. He is survived by his widow Florence, sons John D. and William J., a sister, brother, and seven grandchildren. His many friends in the roofing industry will miss him, and we offer our deepest sympathies to the entire family.

When you spend \$1.00 for *materials and labor* using the *Benoit Tapered Foam System*, what would you spend using one of the other tapering systems?

Systems	Installed	
	Cost	K-Factor
Benoit Tapered Foam System	\$1.00	.24
Tapered Cellular Glass	\$2.00	.38
Tapered Urethane	\$1.80	.14
Tapered Urethane w/Perlite Filler	\$1.60	Varies
Tapered Perlite (Field Tapered)	\$1.70	.36
Tapered Perlite (Factory Tapered)	\$1.50	.36
Tapered Asphaltic Fill	\$1.40	.40
Tapered L. W. Concrete	\$.80*	.70*

*Less expensive but only 1/3 the thermal efficiency and only if it is oven dry.

Our tapered roofs have an average "C" Factor between .04 and .08. If you need a specific average "C" Factor, just let us know.

Phone us, toll free.
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TAPERED FOAM

THE Benoit SYSTEM



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News from affiliates

Florida

Two staff members of the Florida Roofing, Sheet Metal & Air Conditioning Contractors Association (FRSA) received awards at the recent meeting of the American Society of Association Executives.

Charles C. Dockery, the executive vice president of the state association, was awarded ASAE's Key Award—the highest honor that association bestows. Dockery was one of five association executives to receive the Key Award, which is presented annually to ASAE members who have demonstrated the highest qualities of leadership in their own associations, industries and professions, and in civic and community activities.

Thomas Petcoff, FRSA's general manager, received a Management Achievement Award of Merit, and was one of 15 ASAE members so honored. Petcoff won the award for the formation of a commercial credit union to financially assist FRSA's members. The FRSA credit union is Florida's first chartered commercial credit union. Its funds have been used to finance worker's compensation insurance premiums and equipment purchases.

Tennessee

The Tennessee Association of Roofing Contractors recently held a Board of Directors Meeting in Knoxville. Attending were:

President Grover Bennett
 1st Vice President Scott Hubbard
 Secretary-Treasurer Randy Parris
 Director Ex-Officio Franklin Craft
 Directors: Leon Duncan, Dick Callaway, John Campbell, Jim Wheeler, George Willard, Charlie King

It is with deep regret that we report the death, on September 24, of longtime NRCA member George Griffith of Griffith Roofing Co., Beaverton, Oregon. Mr. Griffith is survived by his wife Helen, son Douglas, daughter Shelly, and father G. Ellis Griffith of Chica, Calif. We extend our sympathies to the entire family.

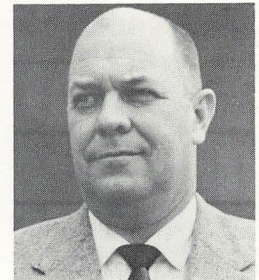
Missing was 2nd Vice President Joe Fray, in Africa on business for the Government.

A major item of business was planning for the association's Mid-Winter Trade Show and Convention, January 20-22, 1977. More information on that is available from the TARC office, 6300 Building, Suite 7605, Eastgate Center, Chattanooga, TN 37411.

Georgia

The Roofing and Sheet Metal Contractors Association of Georgia held its 23rd Annual Convention at Jekyll Island, Georgia, in July. One of the highlights of this meeting was the presentation of

"The Boone Little Noblitt Award" for outstanding service to James M. Brown, of Rome Sheet Metal Works, Rome, Georgia.



James M. Brown

At that same meeting, the following officers were elected to serve during 1977:

President Jerome Pierce
 1st Vice President W. C. Williamson
 2nd Vice President E. J. Lancaster
 Secretary-Treasurer Ralph Newman
 The Georgia Association of Suppliers, an affiliate group, elected the following officers to serve during 1976-77:
 President Curt Benson
 Vice President Bill Giles
 Secretary Jim Barber

Western States

The Second Annual Convention of the Western States Roofing Contractors Association was held in June in Seattle, with over 700 in attendance. There were fifty companies exhibiting their products.

One of the main items on the agenda was the election of officers and directors for 1976-77:

President Robert Clawson
 Vice President Ray Bolt
 Vice President Walter Crow
 Secretary Evelyn Scott
 Treasurer Wayne Vose
 New Directors: James McClain, Pat Lease, James King, Joe Ressel

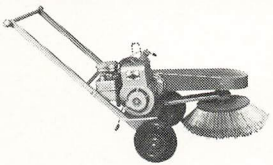
Continuing Directors: Joedy Becker, Bill Casey, K. V. Miller, Larry Musil, Wayne Mullis, Robert Okazaki, Jack Pope, John Rose, Garry Tolley, Bill Wolf, John Zamrzla

The Third Annual WSRCA Convention & Trade Show will be held in Albuquerque, New Mexico, June 22-25, 1977.





Power 36" Sweeper



Patch Sweeper



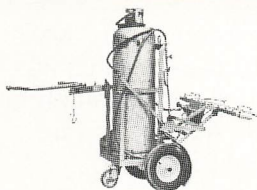
The Original Power Saw



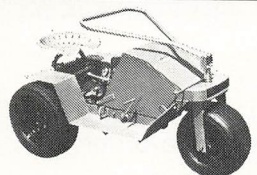
Hilo Boy



#77 Hopper



Roof Dryer

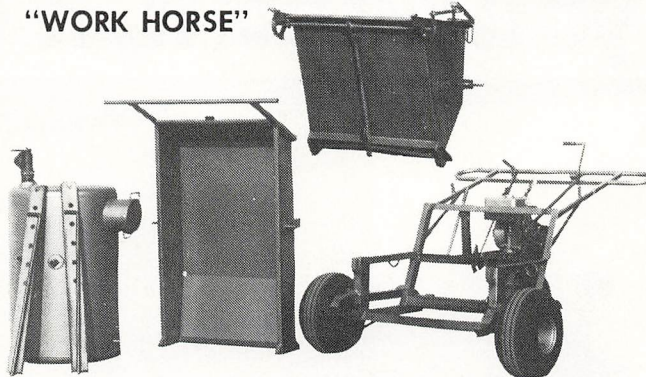


Roof Tractor-Trailer

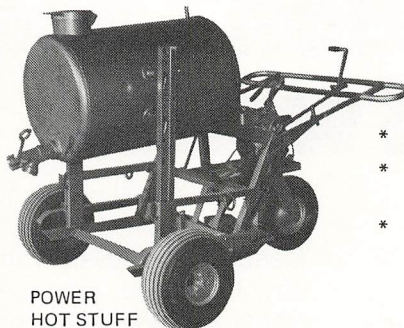
MECHANIZE FOR PROFITS

with GARLOCK Original Roof Equipment

MODEL No. 600 COMBINATION POWERED "WORK HORSE"



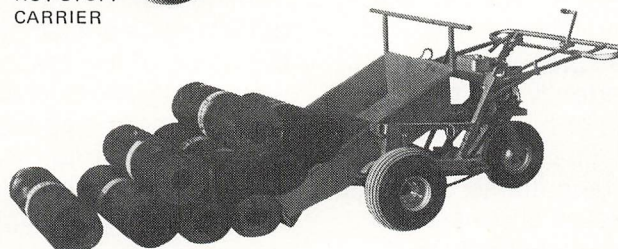
The basic Powered Carrier is adaptable in one minute to a Carrier—an Insulation Carrier—a Gravel or Rubbish Carrier—just press the lever and it dumps so easy. Remove hopper—drop in channel irons, slide 2 pins into 55 gallon tank and you have the best and safest Hot Stuff Carrier. Remove Tank—Install Gravel Spreader—one minute does the trick.



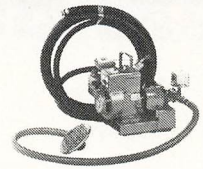
POWER HOT STUFF CARRIER

CHANGES IN ONE MINUTE!

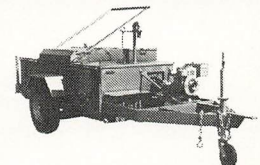
- * 4 HP. B/S ENGINE
- * 4x8 TIRE ON SWIVEL WHEEL
- * 6x8 TIRES ON DRIVE WHEELS



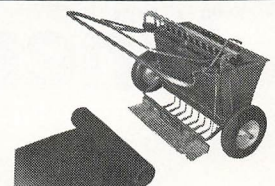
POWER FELT CARRIER



Water Pump



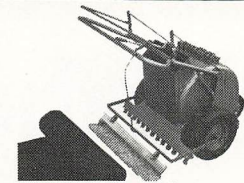
Big Swede



#4000 Carrier



#101 Mop Bucket



Universal Mopper-Coater



36' Conveyor



Insulation Joint Taper

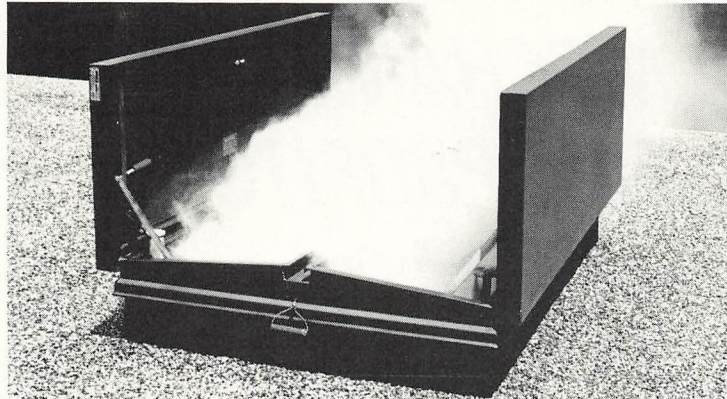
COMPLETE ROOFERS EQUIPMENT CATALOG UPON REQUEST.

ORDER TODAY

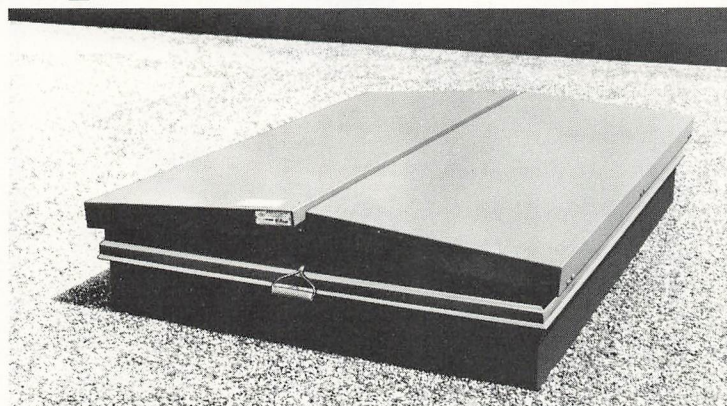
GARLOCK EQUIPMENT CO.
MINNEAPOLIS, MINN.

3250 GORHAM AVENUE
MINNEAPOLIS, MINN. 55426
PHONE 612-929-0496

The Bilco Automatic Fire Vent.

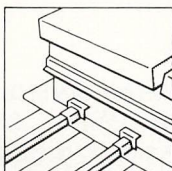


When you need it, it works.



When you don't need it, it still works.

There are two requirements of an automatic fire vent. It must work in an emergency. It must work when there is no emergency. Bilco Automatic Fire Vents do both. Our exclusive patented Thermolatch™ mechanism* is foolproof in an emergency. It is equally foolproof at other times, thus preventing the covers from opening inadvertently due to vibrations within the building or high winds (often accompanied by torrential rain). Bilco Vents work to protect a building and its contents **all the time**. They are gasketed and insulated for complete weathertightness, ruggedly built of 14-gauge steel or 11-gauge aluminum, and each carries our guarantee of proper operation.



Bilco vents and scuttles can be furnished with roof flanges to fit your roof configuration. Unique design prevents dam-up of water between corrugations.

Automatic venting, vertically through the roof, is the modern way to prevent catastrophic fire losses in single-story industrial and commercial structures. Our new booklet, "Automatic Fire Venting Guide" makes it easy for you to determine vent size and spacing. It also points out some of the reasons why Bilco Vents offer your clients the soundest possible value in this type of emergency equipment. Value your client can measure in terms of reliability and long, trouble-free service. Eight standard sizes with UL and FM labels. Special sizes to order.

*Normally actuated by fusible link. Also available with easily resettable electric operator for actuation by smoke detector or other emergency device.

Since 1926. Building our reputation for products that satisfy.



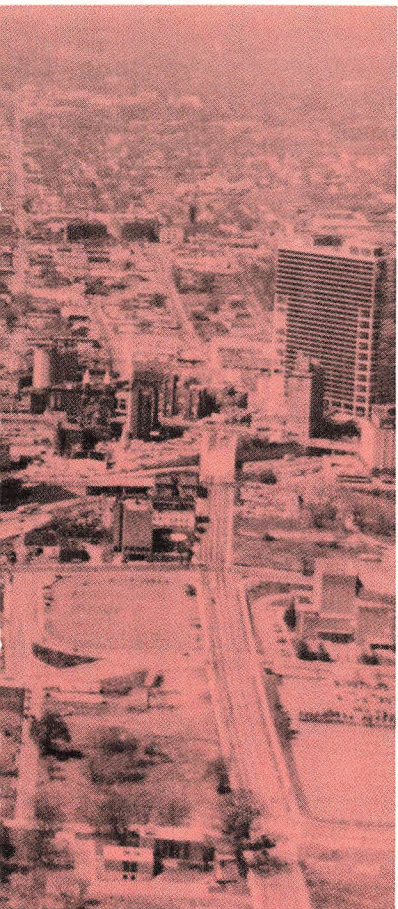
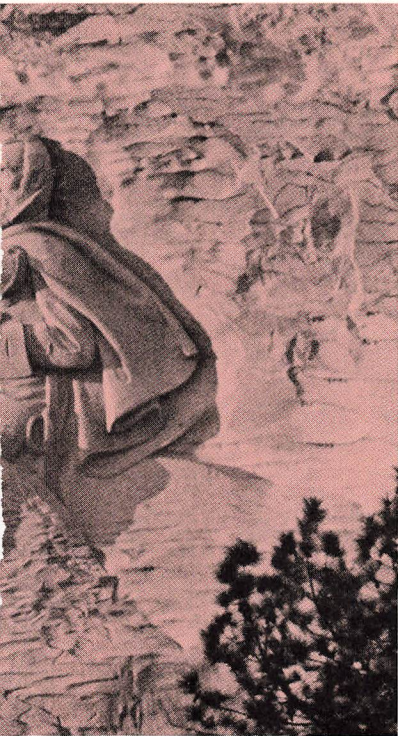
**DOORS FOR
SPECIAL SERVICES**

The BILCO Company, Dept. RS-116, New Haven, Conn. 06505
Manufactured in Canada by: Richards-Wilcox of Canada, Ltd., London, Ontario

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FEBRUARY 7-9, 1977

NRCA
90th
ANNUAL
CONVENTION
& EXHIBIT





PROGRAM NOTES

LADIES.....

will have special activities of their own. In addition to all the regular Convention activities, the ladies can hear dietician and authoress Judy Ford Stokes speak on "Eat Your Heart Out" on Monday afternoon. Tuesday, ladies have a choice of two special events: a tour of historic Madison, Georgia, with lunch at the Old Bank, or a smorgasbord lunch, fashion show, and matinee performance of a Broadway show at the Midnight Sun Theater. On Wednesday morning, two psychologists will present a fun and informative program on "Interpreting Your Dreams."

REGISTRATION....

will be open from Friday, Feb. 4 through Wednesday, Feb. 9 at the Atlanta Marriott. To ensure proper badge identification and speed up the registration process, please register in advance (you save money, too!).

HOTELS....

for the Convention are the Atlanta Hilton and Atlanta Marriott, two excellent properties only a couple of blocks apart. To be sure to get in the hotel of your choice, please register promptly.

RECONVENED CONVENTION....

participants will depart on Thursday, Feb. 10 via Pan American charter for Monte Carlo and an exciting week. Again, promptness is vital if you plan to attend.

FINALLY....

The NRCA Convention is the most important event in the roofing industry each year. The 1977 Convention will be no exception, and we're sure you'll find this to be the best one ever. In the near future, you'll be receiving more information on the speakers and entertainment who will be on hand. In the meantime, do plan to be with us, and please register in advance...just as soon as possible.

Sell the difference.



Project: John Knox Village International Pavillion, Lee's Summit, Mo.
Architect: Environmental Design Association



Roofing Contractor: West-Bar Co./Allen Meyers Co.
(Joint Venture), Kansas City, Mo.

Glasstex*

Textured fiber glass shingles. (From CertainTeed, who else.)

It pays to know the difference that turns roofing prospects into satisfied customers for just pennies per square foot.

That difference is Glasstex:

- The only Class "A" textured surface fiber glass shingle in the business.
- Made to last longer and backed by our 25-year limited warranty against defects.
- Made with our own fiber glass mat, these shingles are self-sealing and dimensionally stable—reducing callbacks from problems such as blistering, curling, cupping or splitting.
- Readily available in 5 versatile colors.
- A unique value. Because they're made to last longer than ordinary shingles, these textured fiber glass shingles actually cost less per square per year than conventional shingles.
- A unique value because they offer superior

Class "A" fire protection.

- And, you get all the benefits of national promotional support, plus all the sales aids you'll ever need.

To find out more about the difference between Glasstex textured fiber glass shingles and conventional shingles, send us this coupon! CertainTeed Corporation, P.O. Box 860, Valley Forge, PA 19482

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*Glasstex is the registered trademark for textured fiber glass shingles from CertainTeed Corporation.

STRUCTURAL CEMENT FIBER ROOF DECKS

by Jack Torbett



Editor's Note: Jack Torbett has 20 years experience in the structural cement-fibre industry. He is Executive Vice-President of Concrete Products, Inc., a major manufacturer of this material. Jack has also served as President of the Structural Cement Fiber Products Association for a total of 6 years. We are grateful to Jack for this, our eighth in a series on roof decks.

Structural Cement-Fiber Roof Decks are composed of treated wood fibers bonded together with Portland cement or other binder and compressed or molded into slabs. These slabs are popular products because they are unique. They combine, into one product, characteristics usually found in three different products. These slabs possess structural strength, excellent insulating characteristics, and outstanding acoustical properties. In addition, they provide an attractive appearance and may be left exposed as a finished ceiling. Due to their many advantages, they are used on practically all types of buildings, including schools, commercial

buildings, factories, shopping centers, churches, and almost any other type.

It is believed that this type of material originated in Austria, where it was used before World War II. After the war its use spread rapidly throughout the world. In some countries the products are called wood wool cement boards and they have many applications. Some of these include sandwich board with a polystyrene center, various shaped forming boards for reinforced concrete construction, and even boards that are reinforced with wood.

In Canada the combination of wood and cement is formed into blocks slightly larger than our standard 8"x8"x16" concrete block. The wood wool blocks are stacked abutting each other without a mortar joint. Reinforcing rods are placed both vertically and horizontally and concrete is poured into the voids. This forms a structural wall with insulation on both sides. Usually the inside is plastered and the exterior can be treated in a variety of ways.

Similar residential construction can also be found in the Bavarian area of Germany and in Austria. Most residences are 3 or 4 stories high with either the blocks or just two flat pieces of Structural Cement Fiber Board fastened with wire to hold the thickness of the void between the two pieces, thus controlling the width of the concrete pour. There are many high rise apartments and commercial buildings in Germany also using this system of construction.

It is not unusual to see a type of construction using Structural Cement Fiber Boards being very common and popular in one country and not even used in another country.

Mainly, however, in the United States these products serve as roof decks, primarily because of their

benefits in this usage.

When they were first introduced in this country, the slabs were made by hand as compared to the current modern mechanized methods. Today, the products are manufactured in modern plants without being touched by human hands.

Full length tree trunks such as pine or aspen are debarked, cut into logs and stored for a period of time to allow drying. Afterwards the logs are sliced into accurately sized excelsior. The excelsior is chemically treated, then coated with cement and evenly distributed in a thick mat. The mat is pressed to the desired thickness and usually retained under pressure to allow the binder to set. Cutting and trimming follow, providing correct edge treatment and proper size.

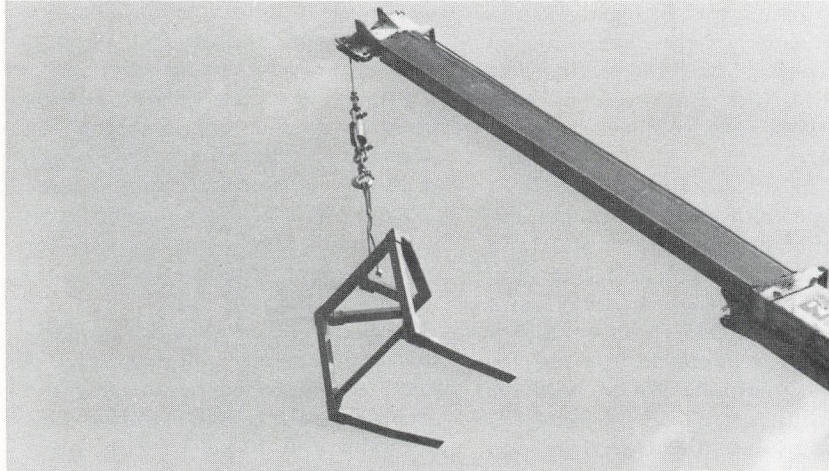
Some slabs are furnished with tongue and groove sides called "plank" for slipped installations. Others are furnished with rabbetted sides called "tiles" for use with bulb tees.

While construction is being performed at jobsites these precast units are being manufactured at plant facilities, thus saving valuable construction time. In addition to saving time by being precast this type of product has many other advantages including insulating, acoustical and structural characteristics. These materials are easy to install and frequently they are considered a do-it-yourself item, even for large projects.

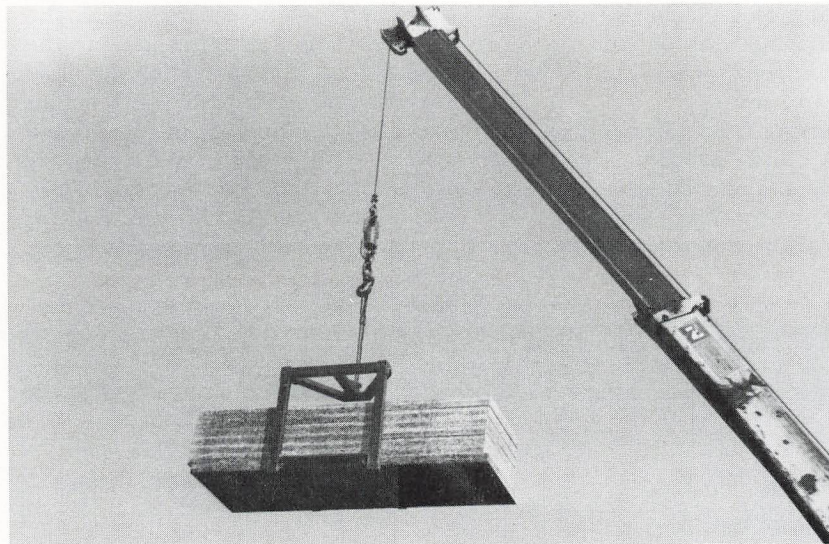
The products provide adequate light reflection for many industrial type buildings without additional painting.

The industry products have been tested by Underwriters Laboratories, Inc., which also furnishes a follow-up service. This service includes frequent plant visits by an inspector to examine and test the product and

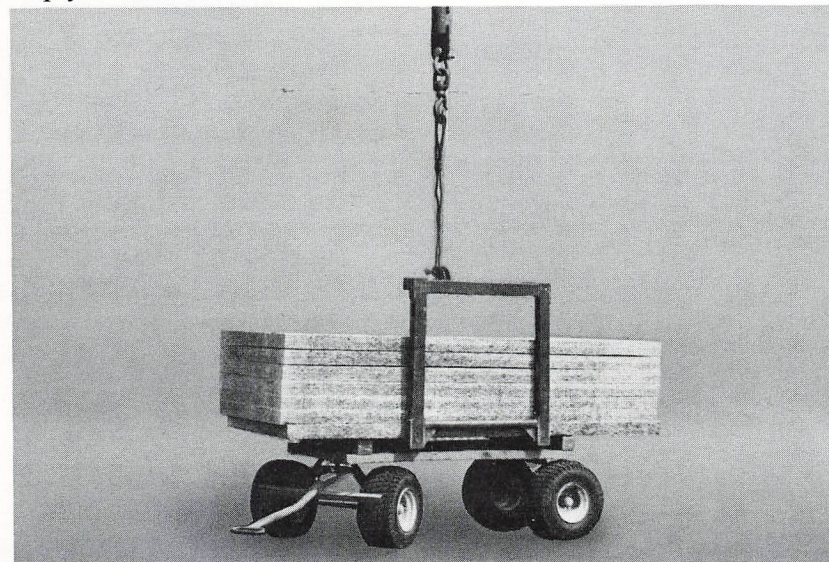
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Shown suspended by this crane is a cradle for lifting unitized stacks of slabs from flat-bed truck-trailer to roof.

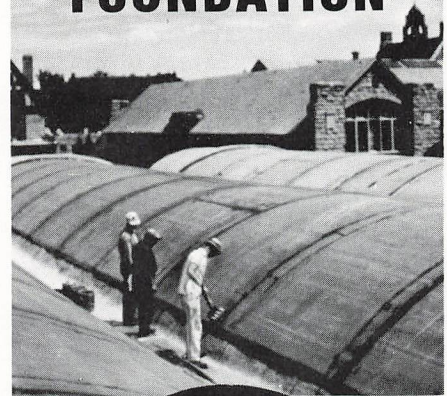


A cradle-load of material is swung into position for lowering onto a roof cart. A unique sliding hook-clevis on the cradle keeps it level whether empty or loaded.

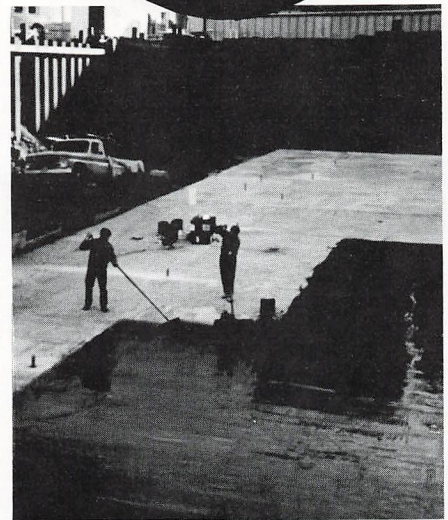


The loaded cart is ready to roll to the exact area where installation is in progress.

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ROOF DECKS

the materials used in the process. This is to assure their laboratories that the slabs meet their requirements for labelling.

One of the most important advantages is the fact that the deck is dry when installed and may be roofed right away. This results in the full insulation taking effect immediately as the building is dried in.

Depending upon the particular manufacturer, K factors range from .495 to .581. They can provide U factors on completed construction as low as .10 without any additional insulation. If the design requires a lower U factor, then this may be accomplished by adding any type of insulation.

Compared to other structural materials like lightweight concrete, gypsum, wood or structural concrete, the cement-fiber roof decks provide more insulation without additional weight. They weigh approximately 35 pounds per cubic foot or about 6 pounds per square foot for 2" thickness.

The material can be cut with an electric hand saw with a carbide

tipped blade. These blades are readily available in most hardware stores. Cutting and fitting to various job conditions are easy. Even unusual configurations can be made. The planks or tiles can even be permanently shaped to meet different curvatures.

Due to the strength of the fiber combined with cement, planks are capable of spanning up to 4'-0" and carry normal dead and live roof loads. The 4'-0" span is very popular with architects and engineers and is usually an economical spacing for supports. With the use of bulb tee sub-purlins, spans can be increased to 11 or 12 feet. The tiles then span from bulb tee to bulb tee.

Slabs are usually handled in multiple-unit stacks that permit fast unloading and placing. The stacks are distributed throughout the roof area by four wheel carts with pneumatic tires.

Removing from carts and placing is fast and simple. Expensive equipment is not required and large areas can be placed each day.

One of the important items prior

to the time of roofing is the correct fastening of the deck units. Uplift resistance in bulb tee applications when properly grouted is substantially more than adequate.

Clipped installations will provide uplift resistance approaching 60 pounds per square foot. This is also in excess of normal requirements.

Each row of planks is fastened with galvanized steel clips or with nails or other fasteners through the deck into the purlins as it is laid.

Tiles in bulb tees should be made to lay flat before grouting. This is easily accomplished by allowing the moisture in the tiles to stabilize. This normally and usually occurs overnight. The slabs will be laying flat in the early morning and can be grouted at that time.

When moisture is present in the slabs and the tops are exposed to the sun there is a tendency for the units to curl upwards at the ends. This can be easily corrected by sprinkling them with water. This also is commonly done at the edges of the rabbetted tiles before grouting to permit a more uniform setting of the

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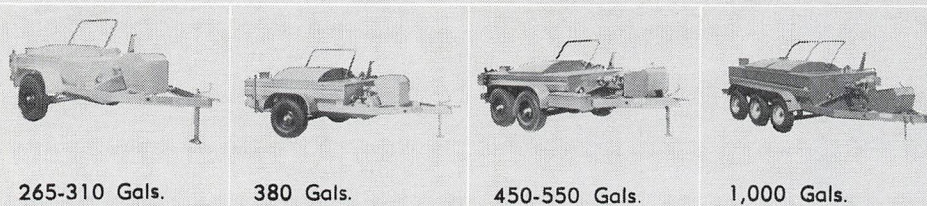


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grout. Even if there is moisture in the deck when roofed, this type of material will dry out from below.

Slabs with felt on the back need to be protected from moisture and should be covered at all times.

Roofing can be attached immediately without delays and the total building construction moves rapidly.

The coated base sheet may be nailed by following the roofing manufacturers' specifications using either the capped E-S nail or the TubeLok nail. The roofing can be applied by nailing when the deck is dry, wet, or even frozen, just as long as the nail is permitted to function properly. Subsequent roofing plies are mopped in the usual manner.

The coated base sheet may also be applied by mopping with minimum melting point 190° asphalt holding back approximately 4" from joints.

When mopping, the deck should be dry for adequate adherence of the steep asphalt. Never use pitch directly on these products.

These products have a very long life and require little, if any

maintenance. An unbelievable number of exposed soffits and exposed roof decks over walkways have never required painting after the initial installation. Replacement of the Portland cement bound products is most unusual and is generally limited to tornado damage.

Since the panels have outstanding sound absorbing characteristics they are often used as acoustical wall panels. They are lightweight and easily installed by clipping or just fastening with screws direct to girts or nailers. This makes them practical for noise control in factories, and public assembly rooms. Spray painting can be readily accomplished and provide a colorful decor. Many of the nation's outstanding arenas, coliseums and gymnasiums utilize this material as both a roof deck and as sound absorbing acoustical panels.

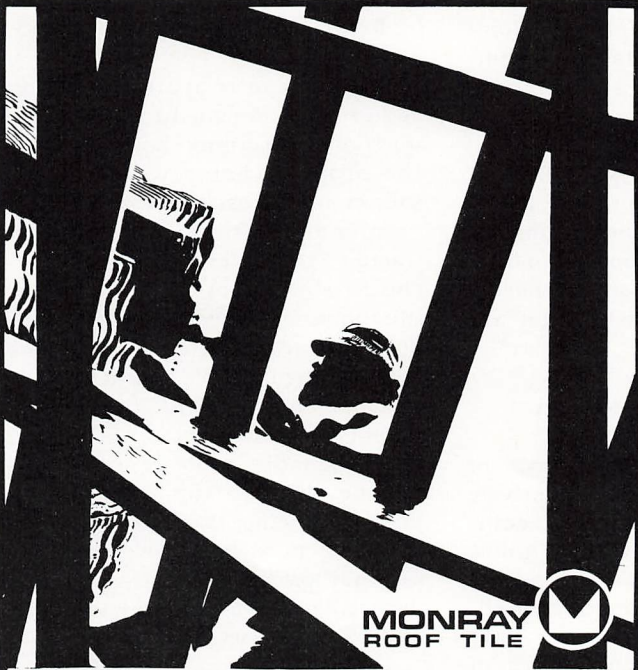
When used as forming for concrete, it is left in place. The cost of plywood forming and removal is eliminated and the planks can be spray painted to blend or contrast with adjoining materials.

The use of these products should

continue to grow because of the increased demand for energy saving in buildings. Also, noise control requirements pose a field of production application that could expand rapidly.

The most likely growth, however, will be in the roof deck market as these products lend themselves readily to combining with urethane insulation to provide an economical fast dry roof deck with minimum thickness and meeting the current insulation requirement with maximum resistance to heat loss or gain. When all of the qualities are taken into consideration the cost is lower.

In summary, Structural Cement-Fiber Roof Decks and Wall Panels are products that have passed the test of time. They are structural units which provide excellent insulating and acoustical properties combined with an attractive appearance. With fast, easy installation and usually no required maintenance, these products are favorite materials for many outstanding architects, roofing contractors and owners. ● ● ●



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INSURANCE AND THE ROOFING CONTRACTOR- PART II

by Richard J. Lietz

Editor's Note: Mr. Lietz is a member of the Association Marketing Staff of NRCA insurance consultant Fred S. James & Co., where he works in the administration and development of NRCA's insurance programs. Previously, Dick was the CNA/Insurance Account Manager for our program from its inception in 1971.

In the last issue of the **Roofing Spec** we examined the basic factors influencing the commercial insurance premiums you as Roofing Contractors have to pay. These included such matters as experience modifications for Worker's Compensation, underwriters' judgement, and your own attempts at reducing losses through safety activities.

Now we want to review the several insurance policies that have increased in cost substantially during the past few years. If you are going to be paying large amounts of money for these policies, you should have a good knowledge of what you are buying.

Worker's Compensation

This coverage is mandatory, of course, whether through private insurance, self-insurance, competitive or monopolistic state funds, or assigned risk pools.

The policy is simplicity itself, although some extensions are available, including a broad form of All States Endorsement, for which a flat charge is commonly made.

A very limited market remains willing to underwrite higher risk business such as roofing operations, particularly in those states which have drastically increased Worker's

Compensation benefit levels. Genuine concern on the part of top management over safety measures is essential to remaining insurable on any kind of reasonable basis.

Broad Form Property Damage

This coverage is available via an endorsement designed to answer the question concerning how much of the property being worked on is subject to the exclusion.

Intended primarily for contractors, this rider clarifies the exclusion while still applying it to many situations excluded by the basic policy. In using different and more specific language to do so, it thereby provides coverage without question for many situations.

For example, while continuing to exclude liability for damage to property being worked on, the endorsement deletes coverage only for **that particular part**, provided the accident occurred away from the insured's premises.

Umbrella Liability

The number one consideration under Umbrella is the huge increase in premium quotations that underwriters are charging. I suppose this will cause some Roofing Con-

tractors to pause as to the need for several million dollars of protection or maybe no excess protection at all. The only problem with this is that, in the event of that very bad accident, now is the time you really need all the limits you can afford.

Here is a brief summary of how the Umbrella provides protection:

A. Excess Over Existing Primary Insurance

Existing Liability insurance policies are not eliminated with the purchase of Umbrella Excess coverage. Rather, they become the underlying layer, above which Umbrella provides excess limits for the same hazards insured under the primary policy, subject to a high limit per occurrence.

Normally this limit is expressed in terms of a single amount applicable to bodily injury and/or property damage claims. Limits are provided in multiples of \$1,000,000.

B. Excess Over Self-Insured Hazards

For hazards not insured at all in existing liability insurance policies,

Umbrella provides coverage in excess of a substantial self-insured retention or deductible. This latter amount is usually \$10,000 to \$25,000 per occurrence. Lest that deductible amount cause you to lose interest, it applies only where you otherwise have no protection at all.

Since it is obviously an extremely difficult task to predict in advance just where a large loss may occur, this broad blanket of Umbrella protection becomes the nearest thing to an insurance buyer's Errors and Omissions policy. In our judgement, it is far better to arrange for a substantial limit of such coverage rather than think in terms of Employers' Liability, General Liability and Automobile Liability limits in the area of \$1,000,000 or more. This still leaves a great deal of exposure unprotected.

Employers' Liability

Limits of \$500,000 are not an uncommon level of protection being purchased by contractors in today's

liberal legal environment. The cost is 1% of the premium.

Additional Medical Benefits

This coverage is for injured employees is not as important as it used to be since all but one or two states have gone to unlimited medical benefits under Worker's Compensation.

All States Endorsement (Broad Form)

This should always be added to eliminate any coverage question for employees working for you while in another state. The Broad Form is added to eliminate any coverage question that arises as a result of insurance company filing requirements in states where operations were not originally identified.

Voluntary Compensation

Many states require an endorsement

[continued]

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INSURANCE

to clarify or define the scope of coverage provided under the applicable Worker's Compensation Law as respects injury to corporate officers or partners. You should ask your insurance representative about this Worker's Compensation extension.

General Liability

There are many important coverages that are provided under general

liability. We would like to mention several areas that seem to cause the most problems for Roofing Contractors.

Completed Operations

This coverage extension, optionally available under standard Comprehensive General Liability policies, has proved to be confusing to some Roofing Contractors as to the intent

and scope of insurance provided. Briefly, when your workmen cause bodily injury to the public (including tradesmen working for other employers) or cause damage to the property of others as a result of an occurrence (as defined), the claim is defended under Operations/Premises Liability coverage. When such injury or damage occurs after completion of your work, Completed Operations Liability will respond. The latter does not extend, however, to cover replacement of the roof itself; only other damage to other portions of the building or contents is within the scope of coverage.

The all-important definition of an occurrence under the liability policy form used by most insurance carriers is "an accident, including continuous or repeated conditions, which results in bodily injury or property damage neither expected nor intended from the standpoint of the insured".

Note that an insured occurrence is not just any happening, but an accident, including accidental or unintended injury or damage taking place over an extended period of time instead of all at once. Except for that extension of time, there is really no appreciable difference between this and the old word accident, which meant a sudden, unexpected event causing damage traceable to a definite time and place. One set of policy limits is intended to apply to losses stemming from essentially the same incident or circumstances.

Each claim is measured on its own individual merits, both as to the applicability of coverage and legal liability on the contractor's part, where the passage of time can play an important role. The policy itself is broad in having no limiting reference to how long ago the work may have been completed, so long as the accident or damage occurs during the policy period.

There have been recent attempts to provide insurance for all allegedly defective materials and/or faulty workmanship, including the cost of repair or replacement, but even with large deductibles the coverage has been withdrawn for all practical purposes, because the underwriters are extremely concerned over providing any form of Errors and Omissions insurance these days.

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Contractual Liability

Hopefully those of you who regularly sign work contracts including indemnification agreements have automatic coverage for such contractual liability as part of your general liability endorsement. These are largely negotiated with the insurance carrier, based upon the number of agreements signed, what is in them, and contract cost. In most cases, the agreed rate is charged against total contract cost, whether a particular job involves such a clause or not. Somebody should sit down and read each contract to determine how much of another's liability is being assumed and how much may be uninsured by the general liability policy. Time-consuming and tedious as it is, this task is best performed by your insurance representative.

It isn't easy. Assumed liability is often buried deep in contract specifications, the most innocent looking sentence occasionally being more deadly than a page full of more obvious clauses. Sometimes a phrase

can be crossed out or a word inserted to limit greatly your liability, minimizing the chances of having a loss charged against your experience record.

Matters would be much simpler for all concerned if there were some uniformity to hold-harmless clauses, and we are working toward that end. These agreements turn up in all shapes and sizes because everyone is an author.

The most common form of Hold-Harmless that we have experienced is joint negligence. An intermediate form responds to defend and pay where both parties to the contract may be negligent and, therefore, legally liable for a loss. For example: "The Contractor agrees to indemnify and save harmless the Owner, Architect, and Engineer, their agents and employees, from and against all loss or expense (including costs and attorneys fees) by reason of liability imposed by law upon the Owner, Architect or Engineer for damages because of bodily injury, including death at any time resulting therefrom sustained by any person or

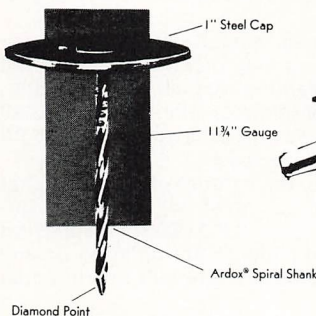
persons or on account of damage to property, including loss of use thereof; arising out of or in consequence of the performance of this work, whether such injuries to person or damage to property is due or claimed to be due to the negligence of the Contractor, his Sub-contractors, the Owner, Architect or Engineer, their agents, and employees, except only such injury or damage as shall have been occasioned by the sole negligence of the Owner, Architect or Engineer."

Here, instead of splitting the bill for jointly caused injury or damage, you agree to waive the theory of contributory negligence and pay as if only you were responsible.

We hope these two articles have been helpful to you in trying to grapple with a very complicated subject. If our words have done nothing else but to move you to talk with your insurance representative about how the current insurance market condition may affect your firm's assets—because that's what it's all about—the articles will have served their purpose. ●●●

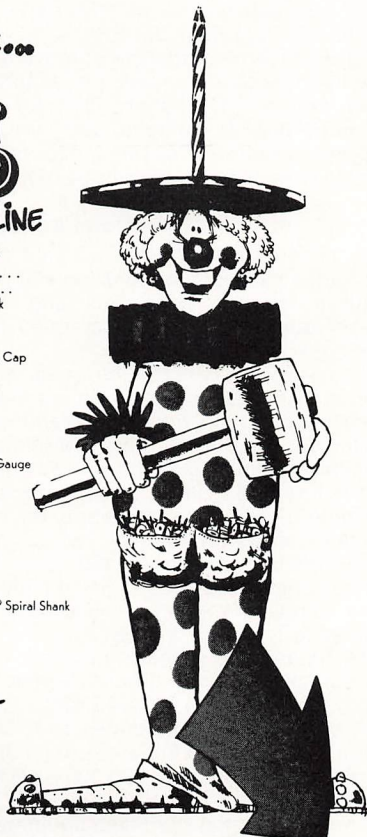
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INDUSTRY DEVELOPMENTS

New Version of A201

The American Institute of Architects has issued a revised copy of its publication AIA Document A201: General Conditions of the Contract for Construction. Several important changes have been incorporated in the new document, especially in the areas of payments and owner responsibilities. For example:

- Architects will not issue change orders to contractors without the owner's signature.
- General contractors will not withhold a larger percentage of subcontractor's payments than the percentage of their payments retained by the owner.
- Owners must prove that they have made financial arrangements to fulfill their contractual obligations.

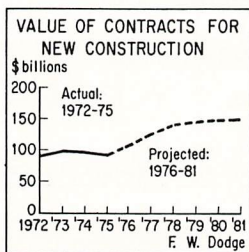
Copies of the Document are available from the American Subcontractors Association at \$1.00 per copy. Checks should be made payable to "American Subcontractors Association" and mailed to 815 15th St. N.W., Suite 902, Washington, D.C. 20005.

Dodge Economist Predicts Continued Recovery Followed by Slow Growth for U.S. Construction

A new five-year F. W. Dodge forecast for the construction industry predicts continued recovery over the next two years, followed by sluggish growth beyond 1978. Energy, environmental and transportation projects will offer above average opportunity in this otherwise "slow-growth" market; and among the nation's major regions, the South is expected to outperform the others.

As long as inflation and energy scarcity continue to be serious threats, economic policies of restraint will severely handicap the industry, according to George A. Christie, vice president and chief economist for the F. W. Dodge Division of McGraw-Hill Information Systems Company.

"If construction costs can be held to an average increase of 5 per cent a year, total contract value will be in the vicinity of \$150 billion in 1981, roughly 50 per cent higher than the 1973 peak, but physical volume will be only slightly ahead of where it was back in 1973," he added. "Most of what will be called expansion during the next five years will be recovery from the severe recession of 1974-75."



The study containing Mr. Christie's analysis includes a national and four regional forecasts covering each of 20 types of structures for 1976-81 and historical data for 1960-75. It is designed for use by building product manufacturers as a guide to planning market strategy in a period of limited growth opportunity.

In describing the bright spots in the industry outlook, Mr. Christie explained that, at any time, some parts of the construction market are much more active than the overall average.

Nonbuilding construction (public works and utilities) will be the industry's strongest area for the balance of the 1970's, he said. This includes power plants, oil pipelines and storage facilities, sewer and water systems, and mass transit facilities. New projects will boost the value of nonbuilding construction from its historical share of 22-24 per cent of total construction to almost 30 per cent by 1981, he predicted.

The next two years will be the most active within the industry because nonresidential building (commercial and industrial structures) has joined residential building in the current recovery, creating a situation where the two upward

cycles will reinforce each other, Mr. Christie said.

"Once the housing cycle begins to flatten out—probably in 1978—the annual rate of expansion of total construction will slow appreciably," he predicted. "It is highly probable that as much as three-quarters of all the expansion in the dollar value of new construction taking place over the next five years will have been realized by the end of 1978."

Finally, Mr. Christie noted that regional patterns indicate that the South, after absorbing its short-term glut of condominiums, will reestablish itself as the nation's most active growth region and by 1981 will represent as much as 33 per cent of the U.S. total construction demand.

The complete five-year forecast or individual sections are available from the Dodge National Accounts Group Sales Manager, F. W. Dodge Division, McGraw-Hill Information Systems Company, 1221 Ave. of the Americas, New York, N.Y. 10020.

Prompt Payments Bill Introduced

Two dozen Congressmen have co-sponsored with Rep. Gilbert Gude (R-Md.) legislation to provide prompt payment to small business doing business with the U.S. Government. The bill (H.R. 13525) responds to complaints from two Washington, D.C. subcontractors.

Rep. Gude has also been in contact with the General Accounting Office, an investigative arm of Congress, which has conducted a "mini-review" of the entire federal payment system which substantiated the problem of slow payments. As a result of these conclusions, GAO has decided to conduct a more extensive, nationwide study which they plan to complete by next spring. Mr. Gude will not be running for re-election to Congress this fall, but he indicated he would brief his replacement on the matter.

The "Prompt Payment Bill" would require the payment of interest by federal agencies on overdue payments. Agencies would be required to issue regulations, not later than July 1, 1977, requiring (1) that any contract with any small business concern bear a specific date for payment, and (2) the payment of interest at the annual rate of 12 per cent for any such payment which is overdue more than two weeks.

Tax Reform Act of 1976

Sen. Gaylord Nelson (D-Wis.) said recently that the tax bill Congress passed "contains several provisions that will help achieve critical economic and social objectives—the preservation of the family farm and the small, family-owned business."

The provisions are the reformed federal estate and gift tax laws and the extension of emergency income tax cuts that were made to help small corporations weather the recession.

Nelson, in his role as chairman of the Senate Small Business Committee, introduced the bills that led to both provisions and guided them to passage.

Under the estate tax revisions, the amount of an estate that can be transferred free of federal taxes will increase immediately from its present \$60,000 to \$250,000 for a surviving spouse; or to \$120,000 if the recipients are children or any other unrelated persons. The latter amount will rise in equal stages to \$175,625 in 1981.

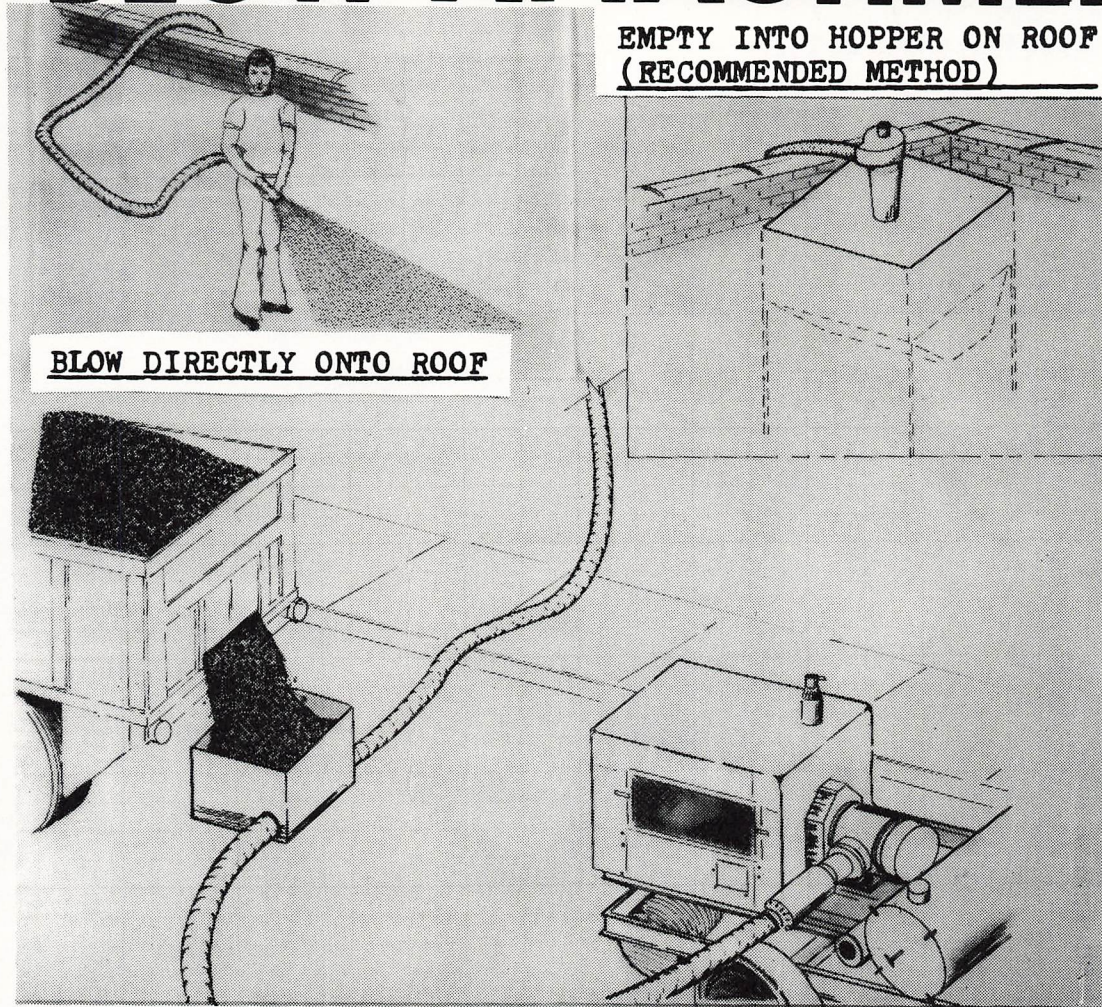
The income tax cuts will reduce by up to \$7000 the amount of tax small corporations earning between \$25,000 and \$50,000 must pay in 1977—a 40% reduction compared to the previous rates. The cuts also will reduce by up to \$500 the amount of tax that must be paid in 1977 by smaller corporations earning up to \$25,000—a 9% reduction over the old rates.

Small firms that purchase equipment also will save up to \$5000 on their tax bill due to extension of the expanded investment credit on used equipment.

Speaking about the reformed estate and gift taxes, Nelson



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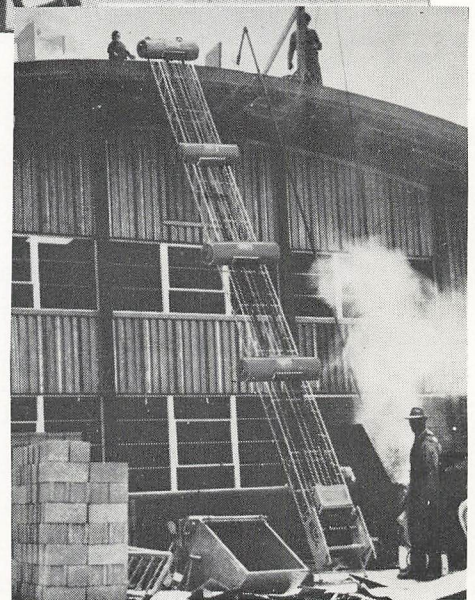
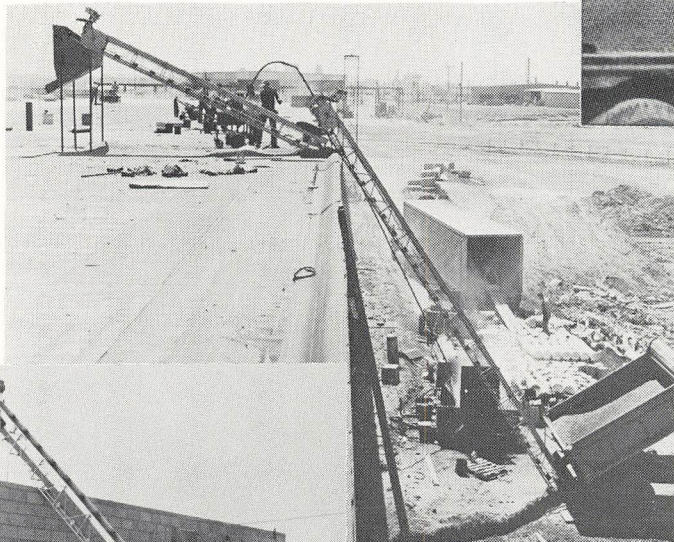
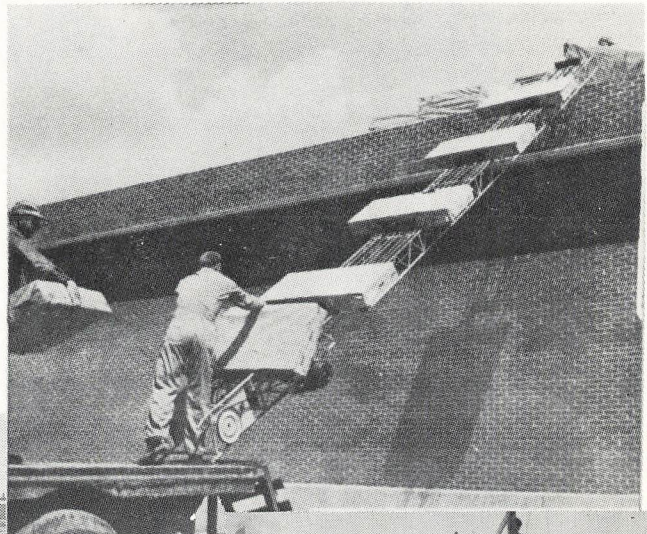
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said: "This means that in most cases, a farmer or a small businessman will be able to transfer the major portion of his estate tax free, so the enterprise will not have to be sold in whole or part to pay the federal estate taxes, as is so often the case now."

The bill introduces into estate taxation an important reform proposed first by Nelson to make the tax fairer. It is the substitution of the tax credit for the tax exemption.

An exemption reduces the value of an estate before taxes are calculated. A credit is a deduction from taxes calculated on an entire estate. The exemption is far more valuable to the very wealthy. This can be seen readily in cases of larger estates taxed at the 70% rate. For every \$1000 exempted there is a \$700 tax savings. But in the case of a small estate in the 30% bracket there is only a \$300 savings per \$1000 exempted.

The estate tax rates adopted in the new bill are close to those in proposals offered by the Small Business Committee in the autumn of 1975. These proposals were based on numerous committee hearings around the country which documented the devastating effect that the estate tax was having on small enterprises. The tax had not been changed since the \$60,000 exemption was established in 1942. Substantial investigatory work preceeded the hearings.

"The 1975 emergency tax cut was the biggest tax break that small and medium sized businesses had received in a quarter century," Nelson said. "It truly was a breakthrough. Today we have another breakthrough. The emergency cuts have been extended for a year, even though we are past the emergency phase of the recession.

"Everyone aware of the financial pressures on small business—and the stability of our society, as a result—strongly feels that these reductions should become a permanent part of our tax code. Permanency would stimulate confidence in people who own small businesses or want to start them. They would invest more, create more jobs and step up the tempo of economic activity.

"Thus the goal of the Small Business Committee, when

Congress reconvenes in January, will be to win a permanent place for this reduction in the tax code," Nelson said.

'Tis the Season To Be Jolly

[As reported by *Passages Magazine*]

As a precautionary measure, town fathers in Boonton, New Jersey, decided a few years ago to insure the St. Nicholas they had hired to interview local boys and girls. It was feared that during his tour of lap-sitting duty, the great man might, by accident, permit one of the youngsters to fall off.

So Boonton officials queried Fireman's Fund American Insurance Companies about the possibility of writing a policy on their Santa Claus. A few days later, they received a reply from John Murphy, an underwriter for the firm.

Murphy made it crystal clear that the insurance company considered the great man to be a poor risk. He explained: "When he laughs, he shakes like a bowl full of jelly. Everybody knows he is overweight and, therefore, susceptible to a myriad of heart ailments, many of them compensable under workman's compensation.

"Being closely associated with reindeer, he is exposed to all sorts of animal-transmitted diseases, also compensable.

"While Christmas skies are relatively serene, Santa never files a flight plan, thus we have the possibility of mid-air collisions with military and commercial aircrafts.

"More often than not, he alights on rooftops, and we have a hazard analogous to roofing operations studiously avoided by our entire industry.

"He delivers his merchandise via the chimney and fireplace route and is, in consequence, exposed to respiratory disorders as well as burned extremities because of carelessly left fires.

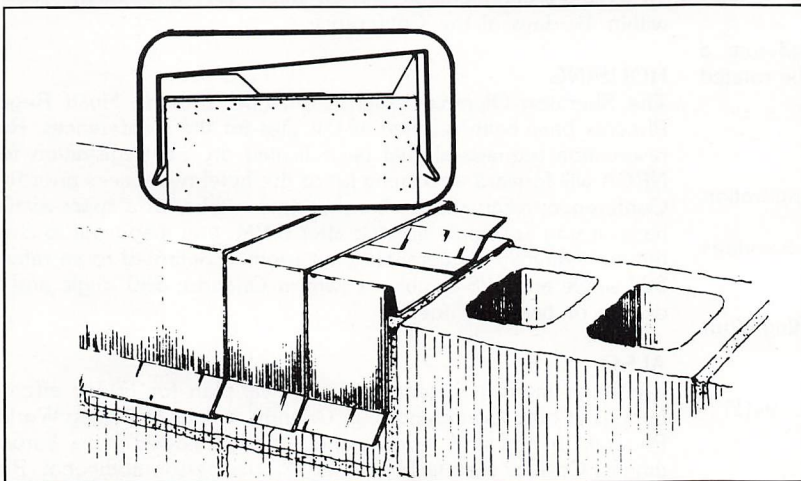
"Besides all this, he was seen kissing some kid's mother, which doesn't say much for his standing as a good moral risk.

"But everybody seems to overextend at Christmas and become a little reckless."

So he wrote up a policy on Santa.



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Give your best men the chance to find out what four leading consultants consider to be the basics of good roofing.

PROGRAM

Wednesday, Dec. 1 & 8

7:00 - 8:30 P.M. Cash Bar Reception and Early Registration

Thursday, Dec. 2 & 9

8:30 A.M. Registration; Coffee and Rolls
9:00 A.M. Opening of Conference
9:15 A.M. Individual presentations and panel discussion featuring:
Werner Gumpertz
Gene McCormick
Ed Schreiber
Bob Stafford

12:30 P.M. Luncheon

1:30 P.M. Discussion Sessions

Each of the four speakers will moderate a discussion session, and sessions will be rotated as time permits.

Friday, Dec. 3 & 10

8:30 A.M. Understanding the new Asphalt Identification System
Dr. Ed. Mertz, NRCA Technical Services Manager (Orlando only)

9:30 A.M. Coffee Break

10:00 A.M. Motivation and Communication: Getting Your Men to do What You Want
in Orlando—Dr. Bill Hodge
in Phoenix—Dr. Pete Schoderbek (9-12)

12:00 Noon Lunch and Adjournment

BACK TO BASICS

is the theme of the 1976 NRCA Roofing Foreman and Superintendents Conferences. Each Conference will feature 4 of the leading roofing consultants in the country, plus other special sessions described at left. Plus—the Conferences allow your best men the opportunity to compare ideas and experiences with others in similar positions from all over the country.

REGISTRATION:

Use the form on this page to register. Registration is open to all interested persons; however, the Conferences will be aimed specifically at roofing foremen and superintendents. Registration fee includes all sessions, coffee breaks, two luncheons, and Conference materials. A 10% cancellation charge will be made for cancellations received within 10 days of the Conference.

HOUSING:

The Sheraton Olympic Villas in Orlando and the Hyatt Regency Phoenix have been selected as the sites for the Conferences. Room reservation requests should be indicated on the Registration form. NRCA will forward a rooming list to the hotel two weeks prior to the Conference; reservations after that time will be on a space-available basis. If you anticipate arriving after 6 PM, you may want to contact the hotel directly to guarantee your room. Confirmed room rates are \$24 single and \$28 double or twin in Orlando; \$30 single and \$38 double or twin in Phoenix.

ALSO:

If enough interest is generated, we will plan for Friday afternoon outings at both Conferences: in Orlando, a tour of Disney World; in Phoenix, a golf and tennis outing—both followed by a barbeque dinner. Cost for each will be about \$25 per person additional. Please indicate on the form if you are interested.

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Registration fee: _____ \$75 per person from Member firm
_____ \$85 per person from Non-member firm

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- Check here if you would be interested in a _____ golf or _____ tennis outing with Barbeque Dinner on Friday afternoon in **Phoenix**—approximate cost of \$25 per person.

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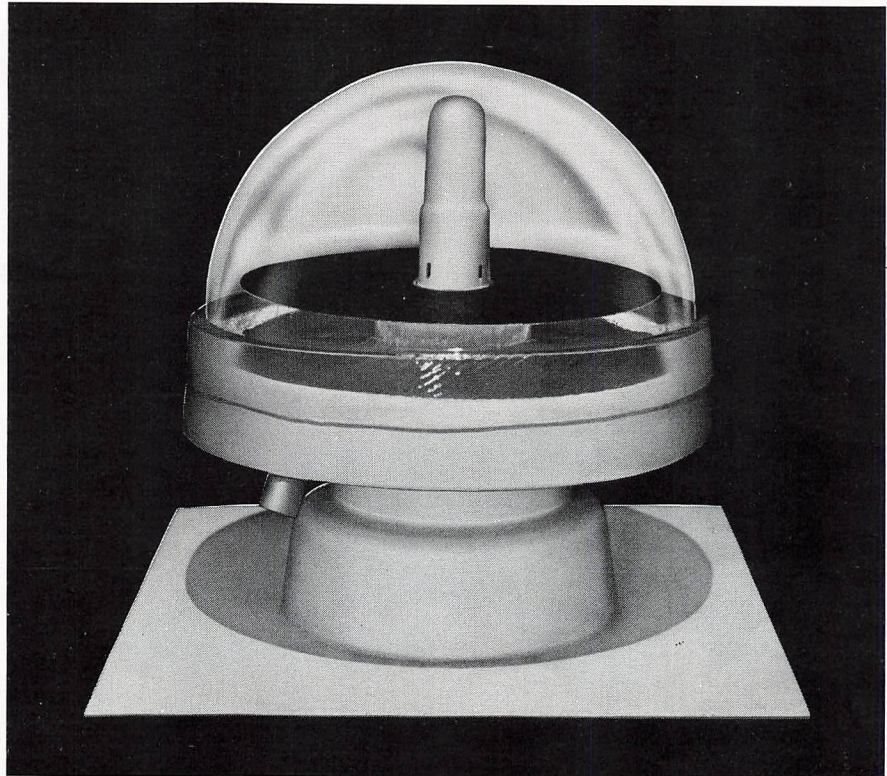
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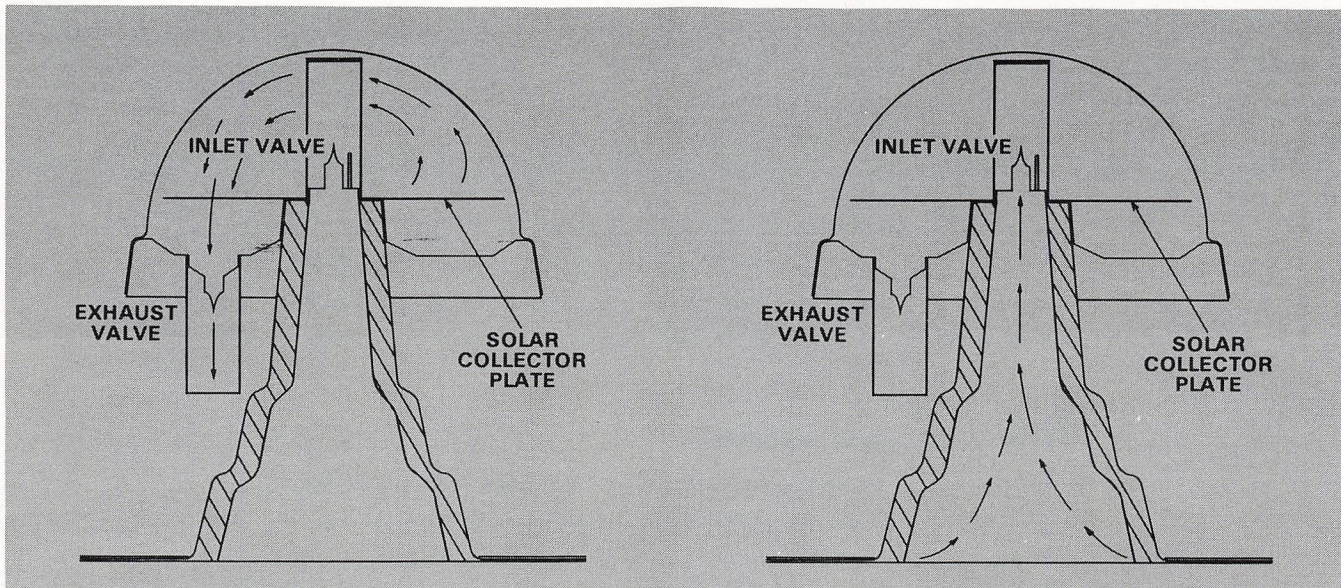
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For more information contact your local Lexsuco representative or our office in Solon, Ohio.



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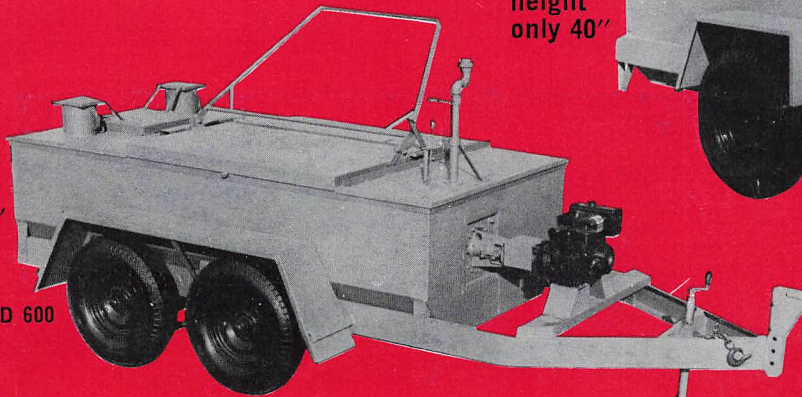


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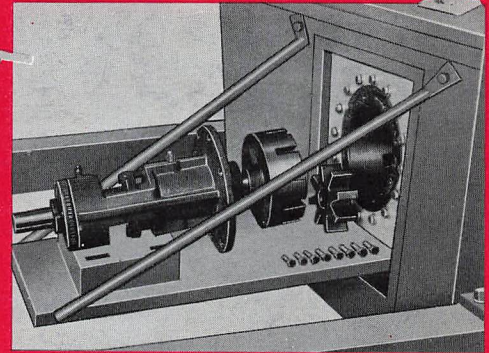
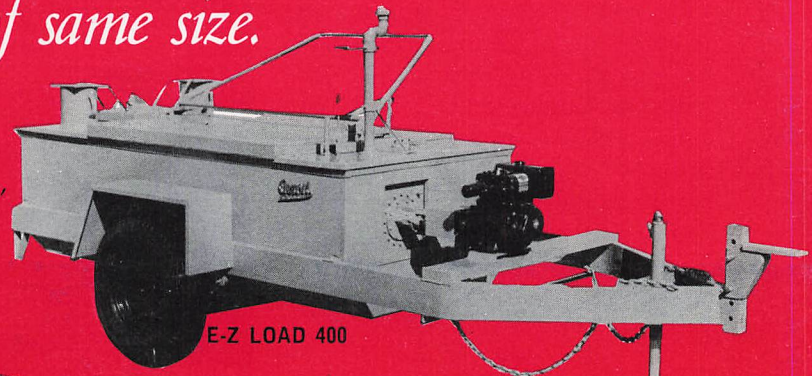
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