

ROOFING SPEC

OCTOBER
1985
\$2.00

P/C Insurance Premiums (in thousands)

\$25

\$20

\$15

\$10

\$5

\$0

81-82
Year

82-83

83-84

80-81

84-85

85-86

**Climbing to the top
on the insurance rate roller coaster**

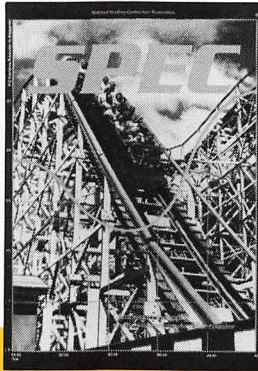


ROOFING SPEC

Vol. 13, No. 10 October 1985

ADVERTISERS

- 32 American Associated Cos., Inc.
- 37 APC Corp.
- 12 Boato Tecsystem
- 4 Carlisle SynTec Systems
- 14 Celanese Fibers
- 35 CNA Insurance Cos.
- 13 Hydrotherm, Inc.
- 9 JBD Supply
- 29 NRCA Education
- 6 Partner Industrial Products
- 7 Partner Industrial Products
- 8 Reeves Roofing Equipment
- 2 Seal-Dry
- 10 Siplast
- 43 Soprema
- 12 Sulmac, Inc.
- 39 Syenergy Methods, Inc.
- 44 Tamko Asphalt Products
- 32 Brian R. White Co.



COVER

Over the last eight years, insurance rates have had more ups and downs than a roller coaster. The most recent round of price increases, however, have been the steepest so far. Photo courtesy of the Chicago Historical Society.

FEATURES

- 15 Climbing to the top on the insurance rate roller coaster
by Jim Matthews
- 21 For many, self-insurance proves an uncaptivating choice
by Jim Matthews
- 23 OSHA says workers must know of chemical hazards at worksite
by Martin Eastman
- 27 Pension plan announces improvements and benefit raises

DEPARTMENTS

- | | |
|-------------------|-------------------|
| 5 National News | 33 Risk |
| 11 Associate News | Management |
| 13 Affiliate News | 34 Coming Events |
| 30 NRCA Update | 36 New Ideas |
| 31 On The Roof | 41 Classified Ads |
| | 42 Tech Talk |



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Quite frequently, Warren Edwards receives the highest compliment in all of business: repeat customers. "They just keep coming back for more of the same," explains Warren. And "the same" includes two important components.

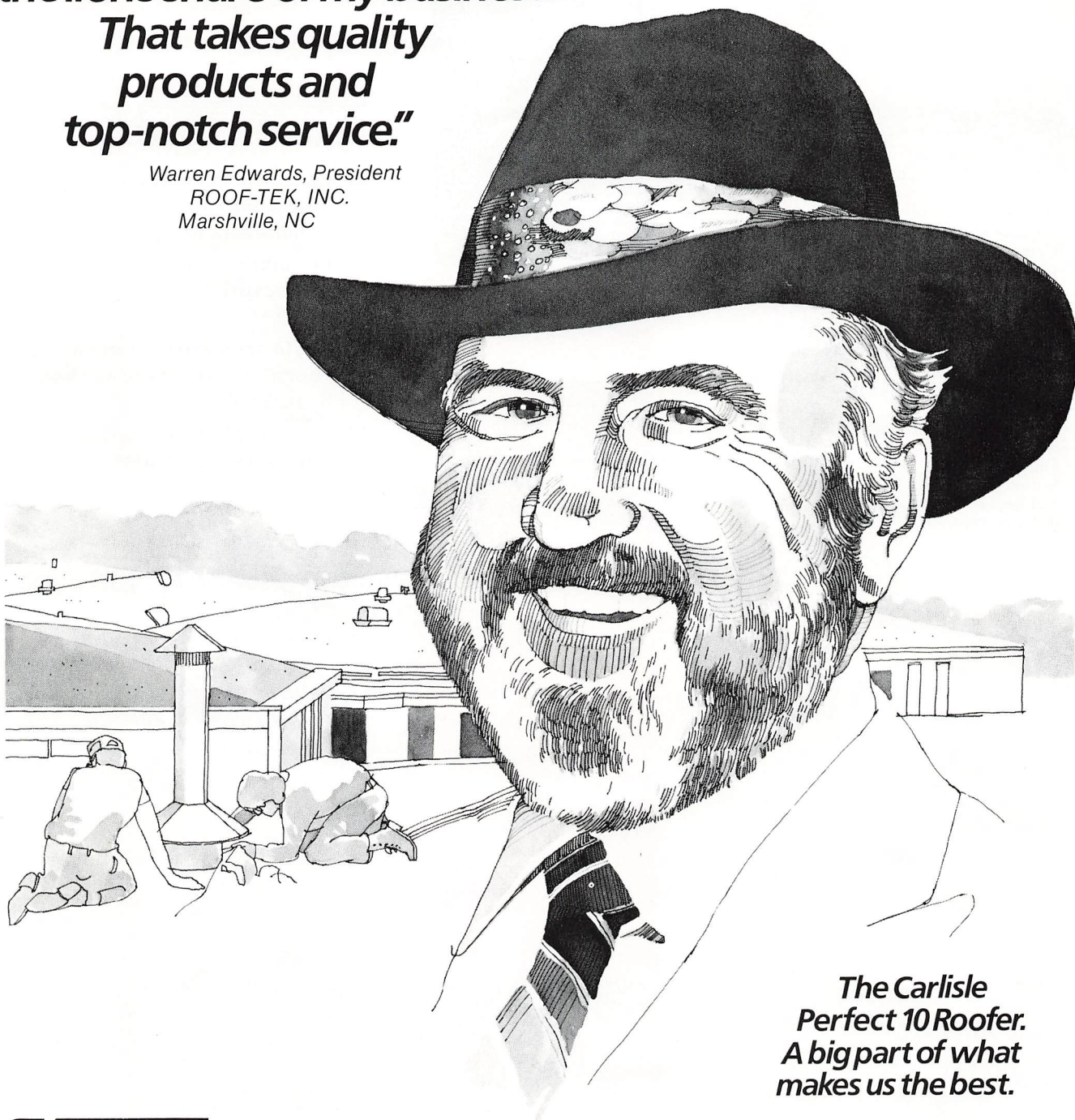
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Executive salary survey finds wide range of pay and benefits

The average salary for construction company presidents is currently \$60,000, according to a new survey by Contractor Profit News (CPN). The presidents also received an average bonus of \$8,340 in 1984, the report adds.

The survey's conclusions were drawn from a sampling of 282 construction firms, where more than 4,500 employees in 15 management-level positions were polled. The survey was conducted for CPN in March by DMC, Inc., of Marietta, Ga.

According to DMC President Bill Fanning, some construction firms are prospering while others have not yet bounced back from the 1982 recession. "Many participants received 8 to 10 percent raises in the past year, many others received no raise at all, and a few reported salary cuts. The same wide range was noted in bonus payments, which are definitely sensitive to economic conditions," Fanning said.

The survey data varies widely when firms are divided by size, type and region. "With a few exceptions, salary levels are highest in the Southwest and lowest in the Northeast," according to Frank Stasiowski, CPN publisher. Among the firm types surveyed, general building contractors had the best pay for top management. Electrical, mechanical and plumbing contractors paid middle-level managers better.

A comparison between union and merit-firm compensation for general building contractors shows no substantial differences in pay or benefits for top-level management. On the other hand, lower-level managers in union firms usually have higher pay and benefits.

Fanning also noted that "many benefits in union firms reflect labor force contract requirements. Union firms usually have a retirement program, and the firms typically pay the entire group insurance costs." Fanning contrasted this with merit shops, where a little more than half of the firms have no retirement program for management employees and only 40 percent pay full group insurance.

The survey also revealed that nearly one-third of the polled firms have a marketing director. The larger companies, with revenues of \$20 million or more, were most likely to employ someone in this position, according to the survey.

Another trend uncovered by the study is the lack of emphasis many firms place on a high-quality management structure. According to Stasiowski, this attitude is most evident in the failure of most firms to staff vital functions such as marketing and computer management and in the wide salary discrepancy between top management and other managers.

According to the survey, chief

financial officers in construction firms report salaries that are 58 percent of their president's. Typical marketing directors make 56 percent of their presidents' salaries. By contrast, financial officers of other small industries and businesses make 80 percent of their presidents' salaries, and marketing directors earn 75 percent of their presidents' pay.

"This wide disparity is bad for the industry in the long run," said Stasiowski. "It shows that firms are either not hiring high-quality people for vital management jobs or they're taking too much out of the business. In some firms, both may be happening."

Non-union contractor claims bias in Statue of Liberty hiring practices

Patricia Bradburn claims that because her company, the American Stripping Co. of Manassas, Va., is non-union, it could not receive a contract on the Statue of Liberty restoration project. She has taken her complaint to the U.S. House Interior Subcommittee on National Parks and Recreation.

Bradburn told the Subcommittee that she had attended a prebid conference last May, intending to bid on a contract. At the meeting, she was informed by a representative of Lehrer/McGovern, the project's general contractor, that union bids were preferred and that her company's chances of being a successful contract bidder were "very small."

Bradburn, angered by the situation, told one of the Lehrer/McGovern representatives, "I can't believe this is happening. This is the Statue of Liberty. She stands in the harbor to welcome immigrants into liberty, and here you are telling me that we as independent contractors have no chance of winning a bid."

Bradburn said she left the meeting without submitting a bid. On her return from Liberty Island to Manhattan, she approached another sandblasting contractor to discuss the

matter and was bluntly told that if her company got the bid, and her employees "made it from Manhattan to the statue, they would not make it back." She said she asked the contractor if that was meant as a threat, and the contractor replied, "It is, and a promise. We do not allow non-union workers in New York-New Jersey territory."

David Moffitt, superintendent of the Statue of Liberty, told the Bureau of National Affairs after the hearing that the only non-union workers on the project were 10 copper specialists from France. Moffitt said that it wasn't necessary to be a union contractor to receive a contract for the project. He added, however, that unions in New York are powerful and that most contractors know how unions operate and would not waste their time trying to operate without being unionized.

Subcommittee chair Bruce F. Vento, a Democratic representative from Minnesota, said he sympathized with Bradburn, but he did not find the situation especially unusual. Pre-construction agreements between labor and management are common in the construction industry, he said.

continued on page 7

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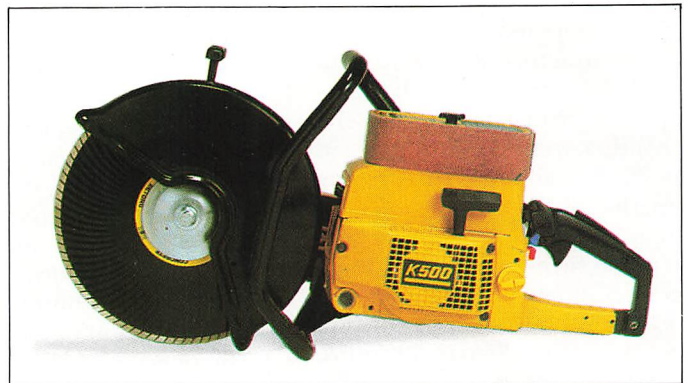
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Fears of unemployment and slow economy blamed for 0.1 percent drop in home sales

Sales of new single-family homes slipped 0.1 percent in June, suggesting the sluggish economy has overwhelmed the benefits of lower mortgage rates, according to a Commerce Department report.

The report stated that new-home sales fell to a seasonally adjusted annual rate of 669,000 units in June, down from May's 670,000 units. Commerce originally estimated that May sales rose 9.7 percent, but later revised its estimate to a 5.7 percent increase.

Mortgage rates, which have fallen recently to their lowest levels in six years, were expected to spark a bigger surge in home sales last month. But the tempo of single-family home construction has lagged behind the late-spring drop in mortgage rates. Commerce reported that overall housing starts rose a slim 1.9 percent

in June, but work begun on single-family homes fell 1.3 percent. Consumers appear to be worried about unemployment and the possibility that their homes will not greatly appreciate in value.

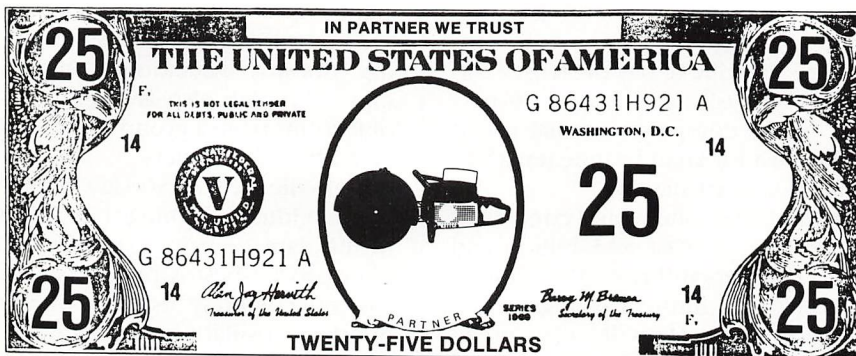
Robert Hopkins, a Chase Econometrics senior economist, blamed the weak and uneven economy for the unexpectedly low levels of home sales. Unfavorable economic factors were especially devastating for typically strong housing states, he said.

New-home sales fell in June in three or four regions, declining most sharply in the Northeast. A 15.4 percent drop brought Northeast sales to a seasonally adjusted 88,000-unit pace, down from June's 104,000-unit rate. Sales rose 8.8 percent in the South.

The Commerce Department report said the adjusted backlog of unsold homes in June was 359,000, matching May's revised figure. This total represents a 6.6-month supply, which doesn't appear to be low enough to spur additional single-family home starts.

Commerce also reported that the median price of a new single-family home in June was \$85,300, up 6.9 percent from May's \$79,800. The average home price increased 1 percent from \$98,200 in May to \$99,200 in June.

Hopkins and other economists expect home sales to pick up slightly in the next several months, but not at a quick pace. "The housing recovery is going to be completely predicated on the resumption of economic growth," said Richard Mount, a Merrill Lynch Economics, Inc., senior economist.



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Correction

Roofing Spec would like to clarify a statement that was made in the July issue's article "Metal roofing: staking its claim for reroofing." The Alumax/ Howmet Building Specialties Division's standing seam metal roofing product does not compose 80 percent of the company's business. Rather, it is only one of a long list of Alumax products.

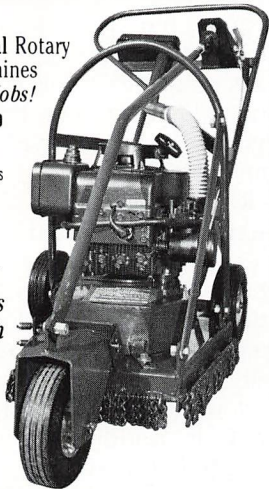
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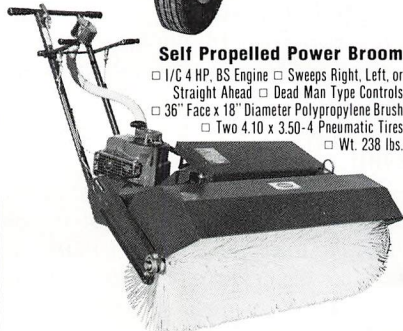
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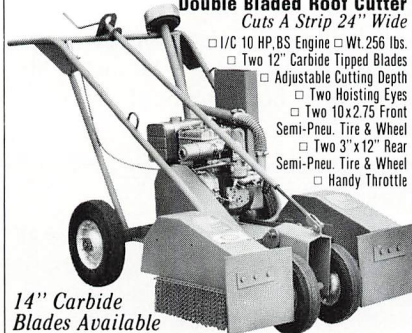
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Manville agrees to pay out billions in plan to satisfy asbestos victims' claims

Manville Corp. officials have tentatively agreed to a plan that will pay billions of dollars to asbestos victims over the next 25 years, while allowing the company to emerge from bankruptcy-law proceedings, reported Jonathan Dahl in *The Wall Street Journal*.

The plan still must be approved by asbestos victim attorneys and the company's creditors. Neither group has seen the proposal, and some objections and requests for changes are likely. According to some sources, however, the plan is similar to one that creditors and victims' attorneys have favored.

On the surface, the plan appears generous to victims and costly to Manville. The plan calls for Manville to create a trust fund to pay asbestos claims. As in an earlier proposal, the fund would be supported in part by bonds issued by Manville totaling at least \$1 billion, \$600 million in insurance funds and as much as 90 percent of the company's common and preferred stock. The plan would also require Manville to pay the trust \$200 million in cash and allocate 20 percent of the company's annual profit to the trust for an indefinite length of time if funds are needed.

In total, Manville would contribute to the fund at least \$2.5 billion and could pay, depending on the value of its stock and future earnings, more than \$3 billion. Manville also agreed to pay commercial creditors \$250 million in cash and \$175 million in notes over three years.

Manville hopes to deduct all funds transferred into the trust. Such deductions are permitted when a company establishes an independent trust to pay certain liabilities. The tax savings, which could amount to hundreds of millions of dollars, wouldn't deprive the victims of any funds, Manville claims. The company also hopes to cut its losses by paying vic-

tims through a joint compensation program with other asbestos producers. In addition, Manville is hoping a special court order will limit its payments for property damage claims.

Although some of the plan's measures could reduce payments to victims, their lawyers are generally pleased with the plan. "If there's enough money for the victims, what difference does it make who pays it?" said Robert Rosenberg, attorney for a committee for asbestos victims.

The plan does have some new features that could jeopardize its success, however. For example, it would allow the company to receive a court order that makes it immune from asbestos-related lawsuits, sources said. Attorneys for asbestos victims have objected to this idea.

Also, sources said the plan sets aside only \$50 million to pay property damage claims, even though \$69 million in claims have been filed. The claims are from property owners seeking to recover the cost of removing asbestos insulation from buildings. The plan also is likely to face objections from a group representing Manville shareholders.

Manville faces 16,500 lawsuits filed by individuals claiming they suffered health damage from exposure to the company's asbestos products. Asbestos, once widely used in pipe and building insulation, is believed to cause lung cancer and other respiratory ailments.

To handle the lawsuits, Manville filed for bankruptcy under Chapter 11. This tactic has allowed the company to avoid paying any asbestos claims until a final payment plan was devised.

Consultant group planning to develop own standards and details

Members of the Roof Consultants Institute (RCI) focused on a five-year plan for expanding membership and services at a recent Region V informational meeting. The June session was held in Newport Beach, Calif.

Mike Kelleher, an independent roofing consultant and RCI Region V second vice president, told the small group of contractors and consultants attending the meeting that RCI's plans include a project to establish an independent set of waterproofing details and roofing standards, possibly by the end of the year. These details and standards would serve as the uniform reference guide for RCI's yet-to-be-recruited corps of registered roofing consultants, he said.

According to Kelleher, the Institute's decision to compile its own set of standards was prompted by the belief among RCI directors that cur-

rent NRCA standards are too general and fail to address the variety of local conditions found throughout the United States.

Kelleher prefaced his remarks by saying he had no particular axe to grind with the NRCA standards. He did note, however, that "while well meaning, some NRCA recommendations can really hurt contractors working out there in the field."

Other 1985 goals mentioned at the informational meeting include: the development of an apprenticeship program for roofing consultants; the selection of state directors for states in which RCI consultants practice; the planning of a promotional strategy; the development of a regional information network; and an overall membership increase.

ARC donates \$2,000 to education institute

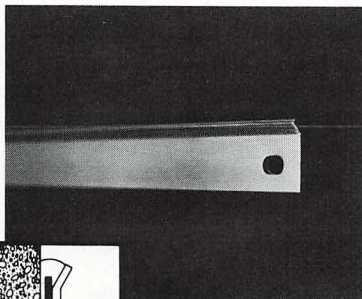
The American Roofing Corp. (ARC) recently made a \$2,000 donation to the Roofing Industry Educational Institute (RIEI).

In making the donation, Gene Scott, president of ARC, said, "The roofing industry has profited to a

very large degree by the educational seminars presented by RIEI during the past six years. RIEI has made better roofing professionals of all of those who have attended their seminars, and we at ARC support wholeheartedly their educational efforts."

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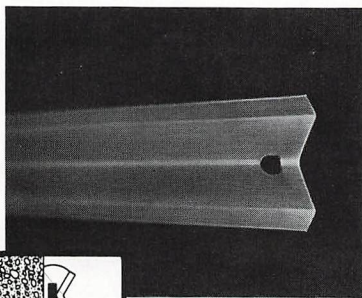


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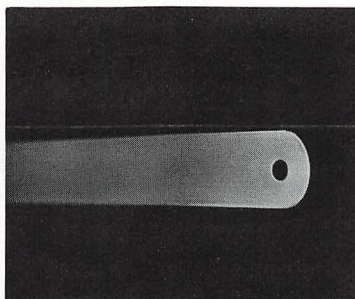
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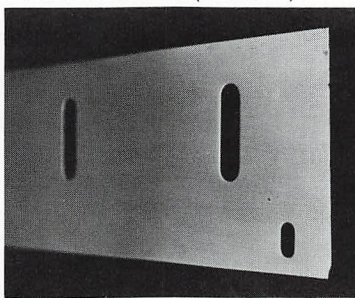
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GAF makes acquisition, names new personnel

The GAF Corp. of Wayne, N.J., has acquired substantially all of Reichold Chemicals' glass fiber division assets.

GAF said the operation, which includes facilities in Nashville and Irwindale, Calif., will be devoted principally to chopped glass fiber production for the mat substrate used in GAF's roofing products.

GAF's Board also elected John Brennan president of GAF's building materials division at a recent meeting. Brennan has been senior vice president since July 1979.

GAF has also announced that Joel A. Asen has been appointed vice president of treasury and business development.

Asen will be responsible for financing activities, and corporate strategic planning and acquisitions.

Before joining GAF, Asen was manager of business development for the General Electric Corp.'s corporate executive office.

Copper Sales adds aluminum division

Copper Sales, Inc., of Minneapolis has added an aluminum products division, which will specialize in aluminum products for the construction and glass industries. Michael Wallace was appointed marketing manager for the new division.

The aluminum products division will provide customers with architectural aluminum sheet in clear satin anodized, durandodic sheet, mill finish sheet, plate and coil.

Carlisle names new VPs and adds new department

H. Joseph Kalbas has been appointed vice president of sales for Carlisle SynTec Systems. He will be responsible for Carlisle's national sales organization, which includes the company's regional sales offices and distribution centers. He will also direct the company's independent sales representatives.

Robert N. Pim has been named vice president of manufacturing for the company. Pim was promoted from plant manager of Carlisle SynTec's Greenville, Ill., plant.

Robert A. Bjorkman has been appointed director of engineering. Bjorkman was SynTec's manager of project and construction engineering.

Carlisle SynTec Systems has also organized a new division to market the company's adhesives and special products.

John J. Arcuri has been named director of the adhesives and special applications division. He is responsible for the sale and marketing of the company's adhesive products, waterproofing and lining membranes, and other products in non-roofing applications.

William E. Witherow has been promoted to manager of sales and marketing for the new division.

W. Thomas Legett has replaced Arcuri as director of quality services, and Donald R. Russell was promoted to manager of support services.

Stevens makes personnel changes

David Conniff has been appointed manager of technical services for Stevens Roofing Systems, J.P. Stevens & Co., Inc., Easthampton, Mass.

In this newly created position, Conniff will supervise the Hi-Tuff field engineering staff as well as the technical service group in Easthampton.

Conniff was most recently a staff engineer in the technical department of Goodyear Tire and Rubber Roofing Systems, New Bedford, Mass.

Bruce R. Wilby has been appointed to the newly created position of business manager of Stevens Elastomerics/Roofing Systems, also of Easthampton.

Wilby will be responsible for the sales group. He will continue to oversee the roofing systems division's technical service group and marketing activities.

Previously, Wilby was Steven's roofing systems product manager.

Condren named director at Cooley

Stephen J. Condren was appointed director of field engineering and technical services for Cooley Roofing Systems, Pawtucket, R.I.

Condren is responsible for the overall direction and daily operations of the field engineering and technical services department.

Prior to joining Cooley, Condren was national technical manager at the plyroof division of Plymouth Rubber, Inc., of Canton, Mass.

ARCO restructures, consolidating divisions

ARCO Chemical Co., a division of the Atlantic Richfield Co., has announced a major restructuring plan to consolidate its building products group along functional lines with centralized manufacturing, marketing and control responsibilities.

The plan will bring various operations, now in six states, to ARCO's headquarters in Philadelphia. This move is designed to improve management of the group's diverse product lines, provide more effective controls of manufacturing and distribution costs, and afford convenient access to company resources for product development.

Two business management and marketing groups have also been established. One is for AlSCO products and the other for Amarlite, both ARCO subsidiaries. Airtron, another subsidiary, will continue to operate as a separate business within the group.

Other functions to be centralized in Philadelphia include a newly established manufacturing services organization, responsible for the group's seven manufacturing facilities. All financial control, administration services, employee relations functions and business development will be managed from group headquarters.

Approximately 100 employees will move to the Philadelphia headquarters from their present offices in Akron, Atlanta, Dayton and Miami.

Varian opens new department

Varian Associates, Inc., of Palo Alto, Calif., has opened a corporate construction and engineering department. Jim Bowman will head the department.

Bowman will be responsible for new facilities construction, major facilities expansion and improvement, and related plant engineering activities for Varian locations worldwide. The new department, which employs 30 people, is part of Varian's corporate facilities operations.

Bowman was formerly corporate architect for Varian.

Fabco names Eastern regional manager

Thomas M. White has been named Eastern regional manager for Fabco Fastening Systems, Stanfield, N.C.

White will be responsible for Fabco's product sales in New York, New Jersey, Massachusetts, Connecticut, Maine, New Hampshire, Vermont, Delaware and Eastern Pennsylvania.

Before joining Fabco, White served as sales representative for the Buildex Division of Illinois Tool Works.

Paslode adds two new positions

Debra Pryts has joined the Paslode Corp. of Lincolnshire, Ill., as a product specialist.

Prior to joining Paslode, Pryts was a regional sales manager for Conde Nast Publications.

Jim Masa has been appointed assistant to the president at Paslode. He will be responsible for strategic and business planning as well as information systems development.

Prior to joining Paslode, Masa was a manufacturing consultant for Inland Steel.

Chinese delegation visits Celotex-Marley

A delegation from the People's Republic of China's Foreign Affairs Department/State Administration for the Building Material Industry recently visited the Celotex-Marley plant in Hollister, Calif.

According to Frank Willows, general manager of Columbia Abece, who arranged the tour, Celotex-Marley's Northern plant was selected because it uses Skandia machinery for its concrete tile production.

Members of the Chinese delegation were: Tung Wei Min, manager; Teng Ai Hua, director; Chen Wan Jun, director; Wang Sanzhong, vice director; and Wang Huai Qing, engineer. Mike Malloy, Celotex-Marley's import and export specialist, accompanied Willows on the tour.

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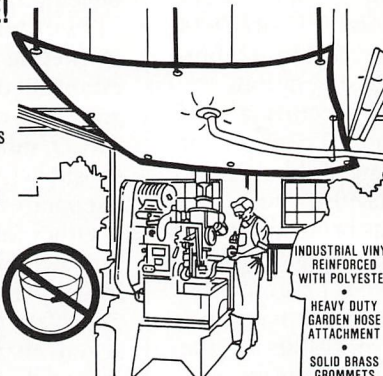
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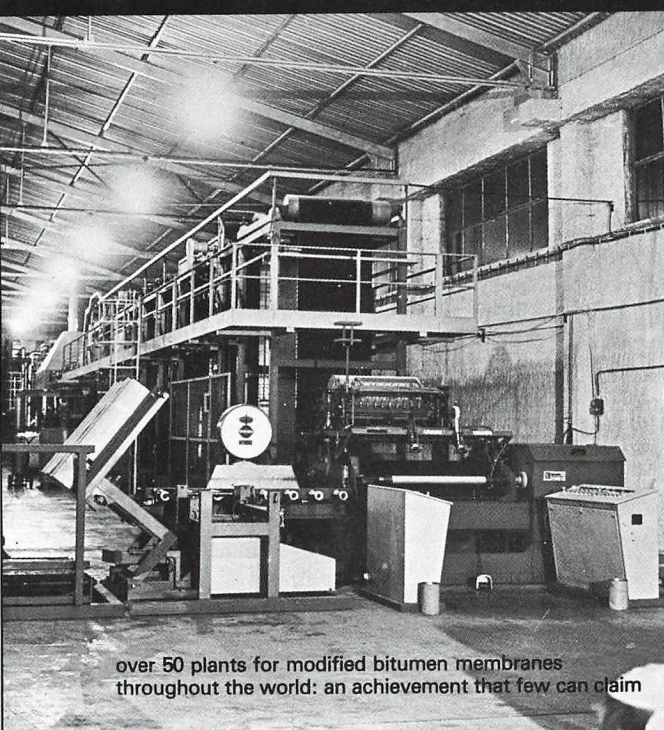
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Check # 3 on Reader Service Card

CRCA hosts Japanese contractors

The Chicago Roofing Contractors Association recently hosted a contingent of Japanese roofing contractors who are in North America to represent the Tozai Asphalt Roofing Contractors Co-Operative of Japan.

The Tozai Co-Operative annually sends a delegation overseas to study, firsthand, roofing and waterproofing application techniques used in the United States and Canada. This year's study tour visited Toronto, New York and Chicago.

F.J.A. Christiansen Roofing Corp.'s president, James McNamara, and sales representative Bill Bourke took the Japanese contractors on a tour of Chicago's Kraft Building, a current Christiansen Roofing project. The contractors were shown the tear-off and replacement being done on the multi-tiered building's built-up roofing system. They were also shown how the materials and supplies are transported to and from the roof.

The Tozai Co-Operative spoke to Sam Nolan, a deputy inspector for the city of Chicago, and Irwin Blumensaadt, the resident engineer in charge of the Kraft Building's renovation. The visitors also had an extensive question-and-answer session with Christiansen representatives.

The visit closed with a tour of the American Roofing Corp.'s (ARC) manufacturing facility, where the Tozai representatives watched the company's manufacturing process and a materials handling demonstration of ARC's modified bitumen roofing system.

RIPF school graduates new class

Chris Davis and Kerry DeLaRosa were cited as "outstanding apprentices" in their respective January and June graduating classes at the Detroit Roofers Apprentice School Apprentice Banquet on June 27, 1985. The school is sponsored by the Roofing Industry Promotion Fund.

Phil LaDuke III, Joint Apprenticeship Committee chairman told the new journeymen that there is a difference between them and untrained journeymen in his opening remarks at the banquet. "You bring to a job a basic knowledge that helps you with the different styles of business in our industry. Your professionalism takes over from there," LaDuke said.

LaDuke urged the new journeymen to upgrade their training by keeping abreast of new technologies while continuing to act professionally on the job. "We must continue that professionalism in order to preserve the survival of our industry," he said.

A highlight of the graduation banquet was the recognition of Tom Garbe Jr., a third-generation roofer, and Cris Davis and Jeff Offenbacher, both second-generation roofers. Cris Davis' father is a former National Roofing Contractors Association director.

MRCA can help with wind uplift tests

The Midwest Roofing Contractors Association (MRCA) is offering help to roofing contractors who must test systems for wind uplift resistance.

Many current specifications require that uplift tests be conducted according to Factory Mutual Loss Prevention Data Sheet 1-52 or the American Society for Testing and Materials (ASTM) Standard E907.

MRCA's Technical and Research Committee helped develop both the uplift test dome and the ASTM standard. Contractors needing a dome or a report from a professional engineer can contact MRCA. A fee will be charged for the Association's services.

For more information call Ray Johnson at 918/865-4036; Paul Morris at 816/861-0142; or the MRCA office at 918/474-8100.

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Check #5 on Reader Service Card

Climbing to the top on the insurance rate roller coaster

My people laughed at me when I told them to expect a 100 percent increase in our property and casualty insurance premiums," recalls NRCA contractor member Bob Bellitt.

Bellitt had just returned home after chairing the January NRCA Insurance Committee meeting in Chicago when he broke the grim news to his colleagues at Arapahoe Roofing & Sheet Metal, Inc., Broomfield, Colo. At the Committee meeting, Bellitt had been told to expect premium increases in the 30 percent to 50 percent range when he renewed his firm's property/casualty (P/C) insurance. Bellitt's intuition caused him to inflate those estimates even more.

"But I was sure wrong," he added ruefully. "We didn't have a 100 percent increase. We got quotes that were 200 percent to 300 percent above what we'd been paying, and some carriers wouldn't even quote on it." Bellitt eventually found a carrier whose P/C rates seemed a bit more reasonable—they were only 150 percent higher than what Bellitt paid the previous year.

If Bellitt's were an isolated case, we could simply dismiss it as bad luck, unusually high losses, or just being in the wrong place at the wrong time. But the fact is, Bellitt's experience is not all that unusual. As many roofing contractors have discovered over the years, insurance rates have more ups and downs than a roller coaster, and unfortunately, this current upswing is steeper and faster than anyone expected.

Everyone's in the same predicament

It may be some small comfort to know that almost every segment of American industry has been hard hit by enormous, unanticipated increases in the cost of P/C insurance. For example, the American Institute of Architects reported that some of its members have been socked with

Jim Matthews is a free-lance writer from Chicago and a frequent contributor to Roofing Spec.

Not a ride for the faint- hearted

by Jim Matthews

increases as high as 1,000 percent when renewing their P/C insurance. In mid-August 1985, *The Chicago Tribune* reported that "many Illinois municipalities, school districts and other government bodies face cancellation of their liability insurer, or as much as tenfold increases in premiums."

Even professions such as law and medicine are not immune. "Lawyers and doctors are being much harder hit than roofers," says Walter Derk, executive vice president of Fred S. James & Co., NRCA's insurance advisor and broker.

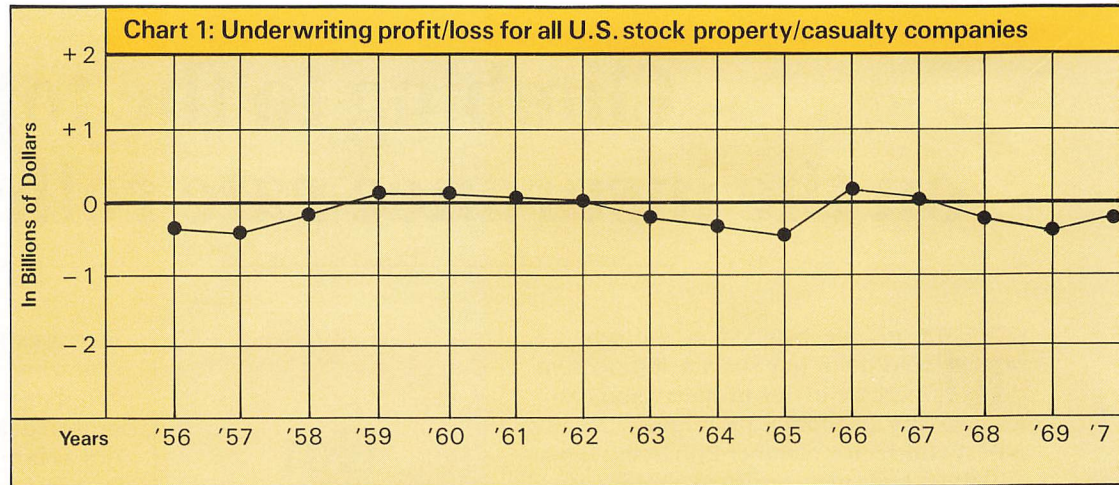
While industry professionals had anticipated some increases in P/C cost, few had any inkling that the price hike would be so high. "I've never seen anything like it in the 39 years I've been in the business," Derk marvels. "We didn't think it would jump like it has." The situation has left many wondering what happened, and why it happened so quickly.

Huge losses create tight market

Two major factors account for the higher prices and reduced availability of P/C coverage. First is the P/C companies' need to pull themselves up by their bootstraps after six straight years of heavy losses. Second is the limits the sudden contraction in the reinsurance market has placed on the insurers' ability to write new business.

The P/C industry is on the bottom of a down-cycle that lasted six years—from 1978 to 1984. While insurance underwriting has always been a boom-and-bust business (see Chart 1), the bust has never been so bad or lasted so long. In 1984, the industry turned in the worst financial results in its history with a composite pretax net loss of \$3.8 billion, 106 percent higher than a year earlier. Its 1984 underwriting losses totaled \$21.3 billion, 61 percent higher than in 1983. Worst of all, the underwriting losses for 1983 and 1984 combined (\$34.6 billion) exceeded the total underwriting losses for the 25-year period from 1958 to 1982.

While insurance underwriting has always been a boom-and-bust business, the bust has never been so bad or lasted so long.



The industry's plunge into its present predicament began in 1977 and 1978 when underwriting profits were relatively high, following major rate increases. At about the same time, several large American conglomerates realized that an insurance company's tremendous liquid assets and megabuck securities portfolios could be combined with prevailing tax law and accounting practices to offer an advantageous way to shelter conglomerate earnings. The tax-exempt income of Sears, Roebuck & Co.'s Allstate Insurance Group, for example, allowed the company to pay income tax rates ranging from 1.6 percent to 30.2 percent between 1981 and 1983.

In addition, current insurance accounting methods enabled P/C company owners—through tax-exempt income, loss carryforwards and carrybacks, and deferred tax liabilities—to significantly cut pretax losses with tax credits.

Conglomerate financial managers were also quick to realize that the huge amounts of cash their insurance companies were reaping from premium payments could, if invested shrewdly, yield even greater profits. This made the sale of insurance important only as a way of collecting investment capital and allowed the pursuit of investment income to become the tail that wagged the dog.

To maximize their cash flows, conglom-

erates deliberately set premium rates below the amount the company would pay out in claims and administrative expenses. The rest of the industry was forced to follow suit, touching off a rate war.

As the competition for cash flow dollars intensified, premium levels came tumbling down. It was, as Derk describes it, "ya-ha time" for an industry long known for its conservative, intelligent approach to pricing. Traditional underwriting, whose guiding principle was that premiums from the business underwritten should be high enough to provide a profit even after paying anticipated losses and expenses, became a thing of the past. As long as investment income remained high enough to more than offset underwriting losses, insurance company owners weren't concerned by the companies' inability to support themselves.

The party came to an abrupt end in 1983, however, when major catastrophic losses sent insurers' loss ratios to previously unheard-of levels—as high as 130 percent for some companies. The deteriorating situation continued unabated into 1984, as the industry recorded the highest underwriting losses in its history and saw reserves dip to dangerously low levels, nearly driving some companies to bankruptcy. Obviously, the industry had to take some corrective actions or face extinction. It chose to jack up premiums to survive.

Chart 2. One contractor's gradually falling insurance costs took a sudden and dramatic jump this year.

Chart 2: One contractor's P/C costs

Year	Coverage Limit	Premium	% of 1978-79 Premium	% Change For Prior Year
1978-79	\$5 Million	\$27,000	----	----
1979-80	" "	20,400	75%	- 25
1980-81	" "	25,500	94%	+ 25
1981-82	\$10 Million	10,500	39%	- 59
1982-83	" "	6,000	22%	- 43
1983-84	" "	5,000	19%	- 17
1984-85	" "	4,700	17%	- 6
1985-86	" "	40,000	148%	+ 751

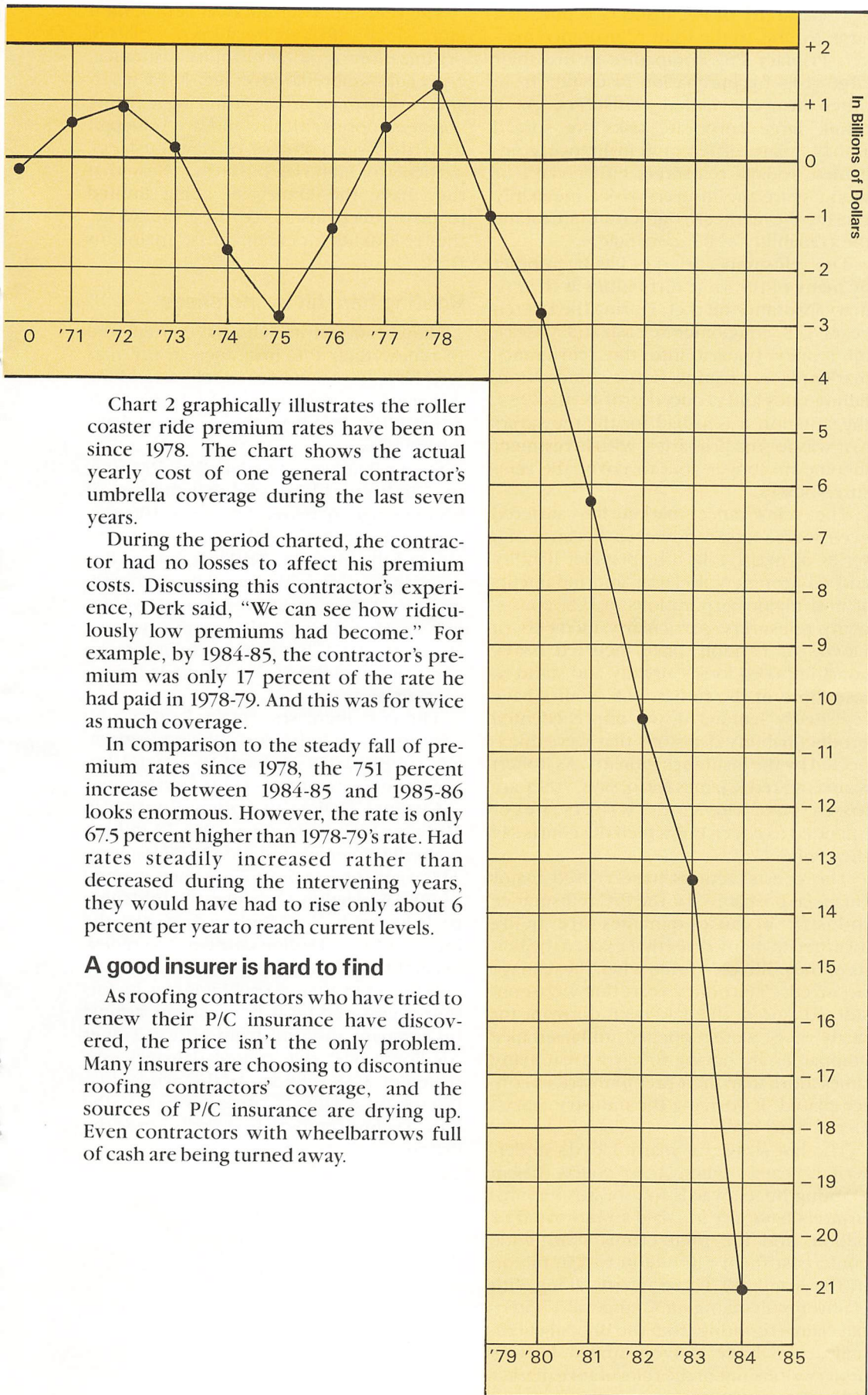


Chart 2 graphically illustrates the roller coaster ride premium rates have been on since 1978. The chart shows the actual yearly cost of one general contractor's umbrella coverage during the last seven years.

During the period charted, the contractor had no losses to affect his premium costs. Discussing this contractor's experience, Derk said, "We can see how ridiculously low premiums had become." For example, by 1984-85, the contractor's premium was only 17 percent of the rate he had paid in 1978-79. And this was for twice as much coverage.

In comparison to the steady fall of premium rates since 1978, the 751 percent increase between 1984-85 and 1985-86 looks enormous. However, the rate is only 67.5 percent higher than 1978-79's rate. Had rates steadily increased rather than decreased during the intervening years, they would have had to rise only about 6 percent per year to reach current levels.

A good insurer is hard to find

As roofing contractors who have tried to renew their P/C insurance have discovered, the price isn't the only problem. Many insurers are choosing to discontinue roofing contractors' coverage, and the sources of P/C insurance are drying up. Even contractors with wheelbarrows full of cash are being turned away.

The industry had to take some corrective actions or face extinction. It chose to jack up premiums to survive.

Chart 1. Dramatic losses over the last five years are causing serious problems for the insurance industry.

Many insurers are choosing to discontinue roofing contractors' coverage, and the sources of P/C insurance are drying up.

The scarcity of P/C insurers is due, to a large extent, to the tight reinsurance market. Primary P/C companies insure their large risks by purchasing insurance from other insurers, called reinsurers. As a result, large corporate risks are spread among many different reinsurance companies. Today's reinsurers either can't or won't share the insurers' risks, inevitably causing the market to tighten and shrinking the availability of P/C coverage.

The reinsurance market has been beset by many of the same difficulties as the primary insurance market. During the last ten years, U.S. conglomerate cash and Mideast oil money poured into the reinsurance marketplace, creating fierce competition, falling rates and reduced profits. By 1984, the situation was as bad for the reinsurers as it was for the primaries, with investment income no longer able to cover the reinsurers' losses.

The reinsurance market has suffered even worse losses, however. Because of a series of massive health, product liability and environmental claims and judgments against major corporations in U.S. courts, many reinsurers, particularly members of Lloyd's of London, have incurred heavy court-imposed losses already and stand to lose more in the future. U.S. courts have repeatedly handed down unprecedented product liability decisions that were unexpected by the insurance industry. As Robert Kuntz of Fred S. James & Co. says, "they are losses that the underwriters never intended to cover, but which the courts say they will."

The courts' actions have caused major financial problems for the P/C reinsurance industry because damages are being awarded in many cases that exceed the limits of the policies in force when the damage occurred. "The policy years that were considered closed, that had been dormant for many years, were reopened, and insurance companies are having to pay a great many times more than their premium prices contemplated. It's driving the industry crazy," Derk points out.

The last straw for many Lloyd's underwriters came when U.S. courts began granting huge awards to asbestos victims. Insurers have already paid an estimated \$2 billion, and the total claims worldwide could cost them \$10 billion to \$30 billion by the year 2000. These awards, along with claims involving Agent Orange and potential claims resulting from the Bhopal chemical leak, have driven many Lloyd's underwriters out of the reinsurance market altogether.

The reinsurers' withdrawal is making it increasingly difficult for all types of U.S. organizations to obtain liability insurance, especially umbrella coverage. Most insurance companies are scrutinizing existing business more critically and are reluctant to write large volumes of new business, particularly high risk business. "Now that they have the luxury of being limited to how much insurance they can write, they're looking for cream puffs," maintains Derk.

Roofing hard hit by increases

Many contractors who have attempted to renew their P/C insurance in the past year have horror stories to tell. A random, unscientific sampling of NRCA members around the country reveals many hair-raising tales.

Steven Reidhaar of Cedars West Roofing, Inc., in Boise, Idaho, said that the cost of his coverage increased by nearly 300 percent, with general liability accounting for most of the increase. Reidhaar, whose P/C coverage is now with CNA, changed carriers at his last renewal even though he was not dissatisfied with his previous carrier. He chose CNA because he believes the company's coverage is "tailor-made for the roofing contractor."

The cost increases caught Reidhaar by surprise, though. He says, "the trade magazines implied that we should be careful, but the size of our increases really startled me."

Clarence Dailing of Dailing Roofing in Midwest City, Okla., says, "My \$2 million umbrella coverage cost me \$1,400 last year. This year for just \$1 million they wanted \$5,000. When they told me that, I told them to 'Kiss my ---.'" Rather than pay the increased rate, Dailing chose not to renew his umbrella coverage.

Dailing's insurance problems may be further aggravated by liability claims against his company resulting from a fire at Tinker Air Force Base that caused damages estimated at \$138 million. As the prime contractor on a large roofing project at the base, Dailing stands to bear the brunt of the claims.

Sam Piper of J.A. Piper Roofing in Greenville, S.C., says that his overall increase amounted to about 40 percent. His case is special, however, because he carries his workman's compensation insurance with a captive insurance company that serves contractors in North and South Carolina. His general liability coverage has been with the same company for the last eight years although there were years when he could have reduced his general liability insurance costs by switching carriers. He chose to stay with his present company because "they have experience with us, and we feel like it could get us a better deal in the long run than by going with another company," he says.

Bruce Martin, AN-CO Roofing, Inc., in Woodinville, Wash., says that his previous carrier got out of the general liability market so quickly that it canceled his coverage a month before the policy's renewal date. Luckily, he found a carrier to cover him that month as well as for the coming year. The coverage will cost him dearly, however. His general liability insurance costs went from \$20,000 per year to almost \$110,000 per year.

Vernon Newell, Southwestern Roofing in Oklahoma City, Okla., says that by changing carriers he was able to avoid a drastic rate increase. His workman's compensation coverage was only 30 percent higher this year, while his general liability costs remained the same. He says, "We were with CNA and they jumped up so high we started looking around. Shoot, they were wanting 300 to 400 percent more this year than the year before. They were ridiculous."

Dave Knutson, Fisher Roofing in Scottsbluff, Neb., thinks his small loss ratio was responsible for the moderate increase he experienced in P/C insurance costs this year. He's been with USF&G for 25 years, and during that time has built a strong working relationship with their local agent. He doesn't shop around for insurance and thinks he's better off that way.

Bellitt says that when CNA told him his rates would be going up by as much as 300 percent, he switched carriers, but he made the change with some reluctance. As NRCA's Insurance Committee chairman, he's aware of CNA's efforts to sustain the NRCA insurance program and support the industry. But the increase in CNA's rates this year "wasn't competitive enough" for him to stay with the company, he says.

Who's in and who's out

With changes happening so rapidly in the insurance industry, most contractors will want to shop around before renewing their coverage. It would be most helpful if they could start out their search with a list of P/C insurance companies that have dropped out of the market altogether or have significantly reduced the extent of their participation. Unfortunately, no such list exists.

The best information available is the informed guesswork of the industry experts. Michael O'Grady, a CNA underwriting manager, says that he has no specific knowledge of who's in and who's out, but he does know that "some companies have shut off new business and other companies have made a conscious effort to get out of certain classes of business."

O'Grady has heard some news through the grapevine, however. "In the South, we've noted that Reliance has withdrawn rather sharply. In other territories—Ohio specifically—USF&G quit making a market for certain types of contractors," he said.

James & Co.'s Derk is hesitant to mention names. He's afraid there are individual agents or offices that are continuing to write business even though their companies have formally announced their withdrawal from a market. He notes that because insurance is a "people business," an insurance agent may well continue to write business to protect a long-standing relationship rather than adhere to the company's stated plan. "It's very hard to say that a company is definitely out. If I made that claim, I'm sure someone else would be able to say, 'I know where they're still in,'" he said.

Keeping costs down

With global economic forces affecting P/C insurance rates and availability, it may seem as if there's little contractors can do to improve their situation. And it is true that the cyclical swings of the P/C industry are beyond any contractor's ability to control.

However, contractors can introduce programs and procedures into their operations that will help control their losses. While these measures may not eliminate losses entirely, they will demonstrate to potential insurers a contractor's commitment to safety. This commitment can give a contractor a leg up when the going gets tough, according to the experts. They claim that contractors who emphasize loss prevention and control are in a better position to:

Bruce Martin's previous carrier got out of the general liability market so quickly that it canceled his coverage a month before the policy's renewal date.

The best assurances the experts can give is that it may not be worse, but it might not be much better.

- keep P/C insurance costs down;
- retain coverage with their present carrier; or
- obtain coverage from a new carrier, if necessary.

Loss control is important because the inherently dangerous nature of the roofing business has prompted insurers to rate contractors individually rather than collectively. Each contractor's insurance rate is based on the company's actual loss experience and an evaluation of the contractor's emphasis on safety and loss prevention.

"Management commitment is vital in planning, implementing and maintaining an effective loss control program," CNA's O'Grady stresses. He claims that CNA statistics show a significant correlation between a roofing contractor's interest in safety and loss prevention and the premiums he or she pays.

Piper agrees. He says, "I think your insurance company, or a potential insurer, looks for a commitment from management. I'm not talking about the eyewash stuff—meetings no one goes to and posters no one looks at -- I'm talking about real commitment. If you can show that you're making a conscious effort to work at it, I think you can benefit, even if you've had some bad experiences in the past."

Bellitt says, "Safety isn't something you can just pass over. First you have to have good safety procedures. Then you have to stand behind them, enforce them and follow up on them. Insurance carriers look closely at the safety programs you've installed, and that can mean the difference between getting high-priced coverage or reasonably priced coverage."

Bellitt also believes that keeping in touch with the agent and the carrier's loss control experts is a good way to build a solid working relationship that can result in favorable rates. As he says, "I think they may rate you better if you ask for assistance and information. They may figure your losses will be lower."

Newell is adamant about safety. "It's money in our pocket," he maintains. "We stress it and always have. That's probably why we have the lowest insurance rates of any roofing contractor in the state of Oklahoma."

All these contractors cited the safety guidelines NRCA has developed as a logical place to begin a safety program. In addition, they mentioned the extensive materials CNA will make available to NRCA members to help them improve their loss prevention and control programs. (A more detailed description of the safety-related information and materials available from NRCA and CNA can be found in the December 1984 *Roofing Spec.*)

Future not so rosy

Contractors who are still reeling from the recent round of insurance price increases may be wondering if the future can be any worse. The best assurances the experts can give is that it may not be worse, but it might not be much better. Derk shies away from making predictions, saying only that, "the consensus, based on what we read, is that we're in for more increases. It's still a tough market."

Derk notes that part of the uncertainty about next year's rates results from the reinsurance treaties that must be renewed on Jan. 1, 1986. At the moment, no one knows for sure how eager reinsurers will be to buy into a market that has already burned them badly.

O'Grady's best guess is that if industry operating results continue to improve through the remainder of 1985 and well into 1986, the capacity of insurance companies to write new business will increase and the market should loosen up. Based on that assumption, he says, "The market will become more competitive, probably by the third quarter of 1986."

In other words, for roofing contractors who must renew their insurance in the coming year, there's good news and bad news. The bad news is that more increases are probably on their way. The good news is that the increases won't be as large as they were this year.

If the P/C insurance industry continues to follow the cyclical pattern of the past 25 years, then another buyer's market isn't too many years off. Nor is another tight period like the present one. That should be reason enough for roofing contractors to get their safety programs firmly in place, making their loss experience as good as possible. That way, if conditions get tough again, they'll have a good track record to prove to insurers that they warrant coverage and favorable consideration on premium rates. It may sound trite, but an ounce of prevention could well be worth a pound of cure.

For many, self-insurance proves an uncaptivating choice

If your liability or workman's compensation insurance costs have gone through the roof, or if you've been dropped by your present insurer, you're probably wondering if a less conventional insurance scheme will give you the coverage you need.

Almost all who have looked into unconventional insurance options have found that there are really only two choices—doing without and doing it yourself.

Doing without insurance—going bare as the insurance pros say—is simply inviting disaster. Most responsible professional contractors do not consider this a safe or logical way to conduct business.

That leaves doing it yourself, which in practice means joining with other contractors to form an insurance company that will cover all of you. It's a much more attractive option than doing without insurance altogether, but there may be hidden disadvantages to self-insurance that are just as discouraging.

Insurance in captivity

An insurance company formed, capitalized and owned by the individuals or companies it serves is called a captive insurer. Robert Kuntz, senior vice president of insurer Fred S. James & Co.'s Chicago office, explains, "Their primary purpose is to provide a competitive insurance program for members at a reasonable cost." He adds that effective loss control and claims management should enable members to obtain long-term financial benefits from reduced insurance costs.

On the surface it appears to be a workable concept, and it's being used quite successfully by roofing contractors in several states to fund their workman's compensation coverage. But forming a captive to provide general liability coverage has proven to be a more difficult undertaking. As yet, no one has succeeded.

Programs are time-consuming and inflexible, they say

by Jim Mathews

Many have tried and failed

Over the last 10 years, many groups have explored the feasibility of setting up their own general liability captives, but few have progressed beyond the talking stage. When they began to closely examine the operation of a general liability captive, they inevitably came to the conclusion that the disadvantages far outweighed the advantages. Contractors found that to gain any advantage from forming a captive they would have to give up too much time and freedom for the endeavor to be profitable.

According to Kuntz, "One advantage is having a reasonably sure and stable insurance market over the long haul, which shouldn't be subject to the wild price fluctuations we see in the conventional market." However, in exchange for price stability, contractors must give up the flexibility to respond to market conditions. When the conventional market is soft and insurers are willing to price their products below cost, as they did between 1979 and 1984, members of the captive may be tempted to drop out, getting their coverage at a lower cost from a conventional insurer. Kuntz says, "Many captives fell apart in the early 1980s for precisely that reason."

Contractors were also attracted to the control owning a captive gave them over the administration of their insurance program. But they discovered that successfully controlling an insurance program required considerable time and effort. According to Kuntz, committees had to be formed to determine who should be insured and at what cost, which claims should be paid, the amounts of the awards, and how premiums should be invested. Contractors who attempted to reduce their commitment by paying someone else to administer their programs found that they lost some of the control over the companies they had hoped to gain by forming the captives in the first place.

The biggest disadvantage most have found is not the time, the commitment or the money; it's dealing with the personalities involved.

In addition to these drawbacks, captive insurance companies have also faced some of the same problems that other primary insurers faced. As with other primaries, captives have to buy reinsurance or excess insurance, which is tremendously expensive. In the current market, captives have not had any better luck getting reinsurance than the big, conventional companies. In fact, some captives may not have done as well.

The biggest disadvantage most have found, however, is not the time, the commitment or the money it takes to operate a captive. It's dealing with the personalities involved. Getting members to put aside their competitive instincts long enough to pay each other's claims or share information on products, services and past loss histories has proved to be a stumbling block too large for many to avoid. According to Kuntz, "Nearly all the groups that seek James' help in forming a captive go nowhere because their members can't or won't put aside their individual differences to work together."

Workman's comp works well

That so many contractors are able to operate successful captives to cover their workman's compensation in spite of the problems involved may seem like a contradiction. However, according to Sam Piper of J.A. Piper Roofing in Greenville, S.C., workman's compensation lends itself well to coverage by a captive because an employer's liability limits are clearly defined. As he says, "It's not like an auto accident where you can be sued for almost any amount."

For the last 20 years, Piper has been an active participant in a captive insurance program for roofing contractors in North and South Carolina. Other contractors have set up successful workman's comp captives in California, Florida, Michigan and Minnesota.

Richard Lietz of Fred S. James supports Piper's conclusion, adding, "Over the years, the industry has collected a wealth of information enabling it to determine very precisely what workman's compensation rates are applicable to a group of any size. It's much more difficult to self-insure general liability because nobody can predict losses with much accuracy."

Premium rates for members of Piper's group are "fairly close" to rates available from conventional carriers, Piper says. If the group's loss experience is good, its rates can be below the cost of conventional coverage. However, Piper admits, "We've had periods in which we had to charge our members more than if they'd gone to an insurance company."

The Carolina captive is set up on a dividend basis. If premium payments in any year exceed losses, the difference is returned to participants as a dividend. "It's done on a pro rata basis," notes Piper.

A Board of Trustees, composed of program participants, acts as administrators and is responsible for operating the program. According to Piper, "That means we collect the money and invest it until it's needed for claims." In this respect, the responsibilities each member of Piper's group must shoulder are the same as those required of a general liability captive member.

Piper believes that limiting his captive's membership to roofing contractors is a definite advantage. "Our safety-and-loss-prevention engineer is *really* familiar with roofing. He's a specialist in our business," emphasizes Piper. That specialized knowledge is also valuable when assessing prospective members' commitment to safety and their safety programs and records.

Forming a captive company may not be the answer to your insurance dilemma. Although some contractors may find a captive workman's comp program to be a cost-saving alternative, it should be remembered that the biggest price increases and the coverage most difficult to find in the current market is for general liability. However, if the traditional insurance market continues to deteriorate, the hassles of administering a captive may seem trivial in comparison, especially for roofing contractors willing to work closely with their competitors.

OSHA says workers must know of chemical hazards at worksite

Do your workers know which roofing materials are hazardous to their health? Do they know how to handle these materials safely under normal conditions or in an emergency?

By next summer you should be able to answer "yes" to both of these questions. Otherwise, you could be cited for not complying with the Occupational Safety and Health Administration's (OSHA) hazard communication standard. The standard, which has the force of law, goes into effect on May 25, 1986 for firms that use hazardous materials.

By developing and enforcing the standard, OSHA is hoping to reduce the number of chemically related injuries and illnesses in the workplace. The standard requires chemical manufacturers, importers and end users to make safety information available in a "usable and readily accessible form" to employees who must work with hazardous substances.

The standard wasn't originally intended to regulate roofing contractors. When it was published in November 1983, its requirements applied only to manufacturers in Division D of the Standard Industrial Classification (SIC) index. Specialty contractors, who are in SIC Division C, were exempt. This summer, however, a Third Circuit Court of Appeals ruling broadened the scope of the standard to include specialty contractors along with other SIC code divisions.

Three components work together

According to the standard, employees are to learn to recognize and handle workplace hazards through proper container labeling, material safety data sheets (MSDS) and training. These three components should complement each other, OSHA says, with the labels alerting workers to the hazards, the MSDSs offering workers more detailed safety information and the training giving workers skills to use the other two components.

New standard has force of law

by Martin Eastman, editor

It is the chemical manufacturers' and importers' responsibility to provide their customers with properly labeled product containers and MSDSs, according to the standard. These firms must begin labeling hazardous products and sending MSDSs with the products by Nov. 25, 1985. The standard requires manufacturers to send an MSDS only with the initial shipment of a product to a customer. Subsequent shipments do not need to be accompanied by MSDSs unless the product's formulation changes.

By the May 25 deadline end users such as roofing contractors must know which products present in their warehouses and worksites are hazardous. User firms are also responsible for training employees who may come in contact with the hazardous chemicals to use the labels, MSDSs and other safety materials sent by the manufacturers and importers.

Many manufacturers and contractors may already be in substantial compliance with the OSHA standard. Companies that fell into an SIC category covered by the original standard have had almost two years to develop labels, MSDSs and training programs. Other companies, including many roofing contractors, have already instituted some sort of hazard communication program in order to comply with their state's right-to-know legislation, which may have a broader scope than the original federal standard. More than 20 states have right-to-know laws on their books that apply to roofing firms.

The OSHA standard preempts state law, however, so there may be some differences in the way the regulations will be administered and enforced. One major change from the states' laws is the OSHA standard's performance orientation. OSHA's standard leaves hazard communication program specifics up to the discretion of the employer, while state laws tend to spell out these details.

The agency will be looking at the end results of a company's hazard communication program rather than the program's specifics.

Commanding performance

To make sure users are complying with the standard, OSHA officials will require these firms to have:

- a written program that details how employees are to be trained;
- information readily available to the workers about the hazardous materials and products they are using; and
- properly labeled containers, indicating products' ingredients and the risks workers face if exposed to the substances.

OSHA's performance-oriented enforcement of this standard means that the agency will be looking at the end results of a company's hazard communication program rather than the program's specifics. The OSHA standard does not spell out how a label or MSDS should look or how workers should be trained, it simply defines what each component should do.

The standard's performance orientation is a two-edged sword, according to some safety experts. On the one side, it allows employers much greater freedom to develop programs that are relevant to the situations their workers generally face. On the other side, the standard offers little guidance to employers who want to know how to achieve the standard's expected results.

Although OSHA does not specify how employers are to comply with the standard, the agency will want to know how program objectives were accomplished. According to Charles O'Connor and Jay Young, two safety experts who have written a preface to the new standard, OSHA will want to know:

- how the employer assessed the hazards present in the company's operations;
- what hazardous chemicals are used in various operations and the physical and health dangers posed by these chemicals;
- how the employer determined that containers were properly labeled, MSDSs were available and sufficiently detailed, and training was adequate; and
- how employees were trained to recognize and handle emergencies involving hazardous chemicals.

Not too early to start program

Even though the deadline for compliance with the standard is seven months away, user firms should start developing a hazard communication program now. The first step is to determine which materials in the warehouse and at the worksites are

hazardous. OSHA considers a product hazardous if it contains one of the 600 substances that the agency believes pose serious physical or health threats. Combustible, explosive, flammable or unstable products pose physical hazards, according to the standard, as do compressed gasses, organic peroxides, oxidizers and pyrophorics. The standard identifies products as health hazards if they cause measurable changes in the body. Chemicals that are carcinogens, irritants, toxins, corrosives or sensitizers fall into this class.

In a roofing operation hazardous chemicals are most likely to be associated with single-ply installations. Products that may contain hazardous chemicals include solvents, adhesives, primers, splice washes, sealants, caulks, tapes and two-pack urethanes. Further information about single-ply product hazards may be obtained from the Single-Ply Roofing Institute (SPRI). The Institute has devised a system that classifies the chemicals used in common single-ply products by the hazards they pose to the users.

Labels and MSDSs list hazards

The best source of product hazard information may be found in the labels and MSDSs the OSHA standard requires all manufacturers to send along with their hazardous products. Under the standard chemical manufacturers and importers must evaluate all of their products to determine which ones contain hazardous substances. If a manufacturer or importer finds that its product could be harmful, it must issue container labels and MSDSs that inform its customers of the hazard.

These labels and MSDSs may take many forms. In keeping with the performance orientation of the standard, OSHA has not developed specific formats for the documents. The agency's only concern is that the labels and MSDSs convey the necessary safety information.

A label, for instance, should warn field workers that they are using a hazardous product and tell them that more detailed safety information may be found in the MSDS that the employer should have on file. Labels may be in any suitable format as long as they are written in English and are displayed prominently and legibly on the product's original container. If a worker transfers a hazardous chemical from a labeled container into another container for immediate use, the second container does not have to be labeled.

OSHA Form-20. This OSHA MSDS form (front and back) has spaces for all of the information the OSHA standard requires.

U.S. DEPARTMENT OF LABOR Occupational Safety and Health Administration MATERIAL SAFETY DATA SHEET Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)		Form Approved OMB No. 44-R1387			
SECTION I					
MANUFACTURER'S NAME		EMERGENCY TELEPHONE NO.			
ADDRESS (Number, Street, City, State, and ZIP Code)					
CHEMICAL NAME AND SYNONYMS		TRADE NAME AND SYNONYMS			
CHEMICAL FAMILY		FORMULA			
SECTION II - HAZARDOUS INGREDIENTS					
PAINTS, PRESERVATIVES, & SOLVENTS PIGMENTS CATALYST VEHICLE SOLVENTS ADDITIVES OTHERS	% 	TLV (Units) 	ALLOYS AND METALLIC COATINGS BASE METAL ALLOYS METALLIC COATINGS FILLER METAL PLUS COATING OR CORE FLUX OTHERS	% 	TLV (Units)
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES		%	TLV (Units)		
SECTION III - PHYSICAL DATA					
BOILING POINT (°F.)		SPECIFIC GRAVITY (H ₂ O=1)			
VAPOR PRESSURE (mm Hg.)		PERCENT VOLATILE BY VOLUME (%)			
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____*1)			
SOLUBILITY IN WATER					
APPEARANCE AND ODOR					
SECTION IV - FIRE AND EXPLOSION HAZARD DATA					
FLASH POINT (Method used)		FLAMMABLE LIMITS		Let	Unit
EXTINGUISHING MEDIA					
SPECIAL FIRE FIGHTING PROCEDURES					
UNUSUAL FIRE AND EXPLOSION HAZARDS					

PAGE (1) (Continued on reverse side) Form OSHA-20
Rev. May 72

SECTION V - HEALTH HAZARD DATA			
THRESHOLD LIMIT VALUE			
EFFECTS OF OVEREXPOSURE			
EMERGENCY AND FIRST AID PROCEDURES			
SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE	CONDITIONS TO AVOID	
	STABLE		
INCOMPATIBILITY (Materials to avoid)			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR	CONDITIONS TO AVOID	
	WILL NOT OCCUR		
SECTION VII - SPILL OR LEAK PROCEDURES			
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED			
WASTE DISPOSAL METHOD			
SECTION VIII - SPECIAL PROTECTION INFORMATION			
RESPIRATORY PROTECTION (Specify type)			
VENTILATION	LOCAL EXHAUST		SPECIAL
	MECHANICAL (General)		OTHER
PROTECTIVE GLOVES		EYE PROTECTION	
OTHER PROTECTIVE EQUIPMENT			
SECTION IX - SPECIAL PRECAUTIONS			
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING			
OTHER PRECAUTIONS			

PAGE (2) DPO 934-110 Form OSHA-20
Rev. May 72

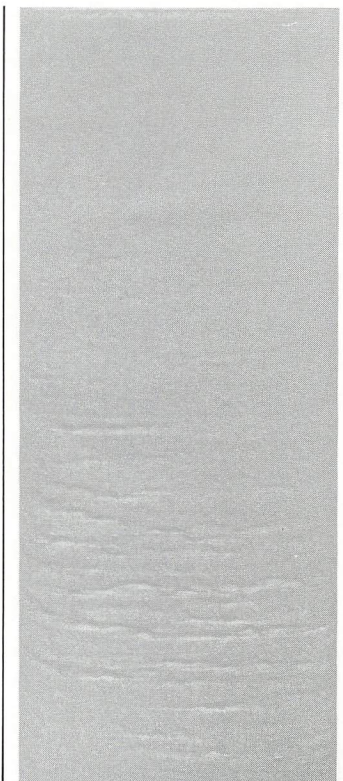
According to O'Connor's and Young's analysis of the OSHA standard, it is not necessary for a product label to give precautionary information. As long as the label identifies the material in the container, states any applicable hazard warnings and gives the name and address of the product's manufacturer or importer, it is in compliance with OSHA's regulations.

The place for more detailed safety and precautionary information, according to O'Connor and Young, is the MSDS. This document should:

- identify the product by its common name or trade name and list any of the product's individual chemical components that contribute to its harmful nature;
- state the physical and chemical characteristics of the product such as the melting point, vapor pressure and specific gravity;

- state the physical hazards such as flammability that are associated with the product's use;
- state the known health hazards associated with the product's use;
- describe the measures workers can take to avoid the product's harmful effects;
- describe the emergency and first aid measures that should be taken in the event of an accident;
- state the date that the MSDS was prepared or revised; and
- state the name and street address of the company that prepared the MSDS.

According to the OSHA standard, it is the product user's responsibility to make sure all of the hazardous materials in its warehouse and worksites are properly labeled and documented. This means that roofing contractors should have an MSDS on file for every hazardous chemical their workers use.



For worker safety training to be effective, the information must be presented in a way that will not bore or scare employees.

Since last summer, SPRI and NRCA have been working together to help contractors gather this information. SPRI has collected MSDSs from all of its manufacturer members and has made this information available to NRCA. The Institute has also urged its members to adopt consistent label and MSDS formats.

Users must train workers

It is also the user's responsibility to train field workers to use the information contained in the safety labels and MSDSs to avoid injuries or illnesses. The OSHA standard states that all employees who currently work with hazardous products must receive safety training by the May 25 deadline. Whenever new hazards are introduced into the worksite or new employees are added to the workforce that uses hazardous substances, the training must be repeated.

Like the labels and MSDSs, this training may take many forms. The OSHA standard spells out the results the agency expects employer training to achieve rather than the methods employers must use to achieve these results, according to John A. Pendergrass, manager of 3M's hazards awareness products division.

Pendergrass says that OSHA wants field workers to be able to describe the materials they are working with, the products' potential hazards, the symptoms of exposure and the protective measures that are to be used with the product. The agency also wants employees to know about the hazard communication standard itself, including its effective deadlines. The ability to recite this information is enough evidence, in OSHA's eyes, to show that a worker has received adequate training, according to Pendergrass.

Achieving these results may take some time and work on the employer's part, however. For worker safety training to be effective, the information must be presented in a way that will not bore or scare

employees. A publication called *Industrial Safety & Hygiene News* has listed six guidelines it believes are essential for effective worker training. The guidelines include:

- **Know the audience.** Use terms that the workers understand. Trainers must also be aware of the connotations certain words or terms such as "cancer" or "chemical contamination" have for the employees. Recent events in the news, for instance, may make workers react emotionally to some topics.
- **Don't scare.** The information must be presented in a calm and professional manner. Some experts suggest that by using examples of the safe use of hazardous chemicals such as pesticides in the home, a trainer can reassure workers that, if the substances they apply at the worksite are handled correctly, there is little risk of harm.
- **Don't bore.** Workers would rather answer questions and interact with the teacher than be lectured at.
- **Be honest.** Make sure workers know of all the hazardous chemicals with which they will be working and the severity of the hazards associated with each of these substances.
- **Be prepared.** Make sure trainers have the knowledge to answer tough questions. It is also advisable to have technical support available to back up the trainers.
- **Be familiar with equipment and processes.** Trainers should be familiar with the safety equipment they are demonstrating and also familiar with the workers' day-to-day operations. This way the safety measures that are taught will be relevant to real worksite situations.

NRCA has more detailed information about the OSHA standard available, including a generic hazard communication program developed by Intereg Group, Inc., of Chicago. Intereg's program can be adapted to meet individual employers' needs. Components of the program include sample posters, signs, labels and MSDSs as well as in-depth explanations of OSHA and state regulations. For more information contact Carl Good at NRCA headquarters 312/693-0700.

Pension plan announces improvements and benefit raises

The August 1985 meeting of the Board of Trustees of the National Roofing Industry Pension Plan produced dramatic improvements in the Plan for both current participants as well as future retirees.

The Plan is the pension program of the United Union of Roofers, Waterproofers & Allied Workers, and is offered to the Union's locals on a voluntary basis.

The Plan has four trustees in all, two from the union and two from management. The trustees' duties include obtaining responsible investment managers and making sure the fund is administered competently.

NRCA member William Steinmetz Sr. is one of the two contractor trustees of the national's Pension Plan. He has been a trustee for 10 years.

Steinmetz says the Plan has been funded very conservatively, and that this has given the program a solid foundation. "We have not tried to be the fastest runner on the block," he said. The trustees' goal, according to Steinmetz, has been to achieve an above-average return on investments without putting the funds at risk.

This conservative fiscal policy has allowed the fund to more than meet its actuarial assumptions, Steinmetz says. The results of the latest actuarial valuation of the Plan showed that the program had made actuarial gains that can be used to make large-scale improvements.

"Our actuary determines what benefits we can provide," according to Steinmetz. After the actuary examines the fiscal health of the Plan, he gives the trustees a variety of options to choose from. The trustees are then free to pick the option they feel will be of most benefit to the Plan's participants.

Caution pays off

Because the trustees wanted to be certain the Plan was on a sound footing, they did not increase benefits as soon it was financially possible. "We decided to play close to the vest," Steinmetz said. Instead, they waited until Plan improvements could be made without causing undue financial worries.

The recent changes made to the plan became effective Jan. 1, 1985. They are:

Benefit increases

A. Retirements prior to Jan. 1, 1985:

- All participants who retired prior to Jan. 1, 1985 for normal, early or disability retirement will have their monthly benefit increased 20 percent. This increase will be retroactive to Jan. 1, 1985.

B. Retirements Jan. 1, 1985 and after:

- The value of each base plan credit is increased from \$2 to \$3 per month.
- The supplemental monthly benefit is increased from 3.25 percent to 4.3 percent of supplemental contributions made on the employee's behalf. (All contributions in excess of 5 cents per hour.)
- The lump-sum, preretirement death benefit for non-married vested and non-vested participants is increased to \$1,000 or 43 percent of the total supplemental contributions, whichever is greater.

Other plan improvements

Beginning with the Jan. 1, 1985 plan year:

- Full vesting is reduced from 10 years of vesting credit to five years.
- A participant can retire with a full, unreduced pension upon attainment of age 62 and 10 years vested credit.

These improvements will benefit all roofers regardless of whether they are active or retired.

- The number of hours needed for a full base plan benefit credit in each plan year (calendar years) is being reduced from 1,500 hours to 1,000 hours.
- The new credit schedule for earning base plan benefit credits and vesting credits in each plan year is as follows:

HOURS	CREDIT
1,000 or more	1.00
750 to 999	.80
600 to 749	.60
450 to 599	.40
300 to 449	.20
0 to 299	0

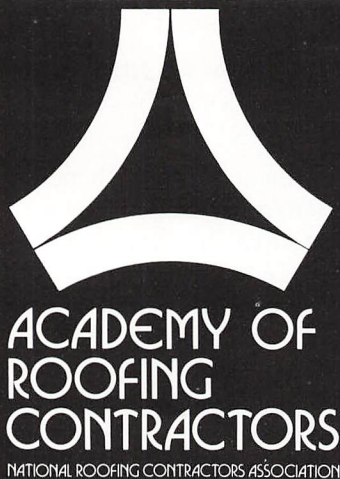
- A participant can earn unlimited future service base plan credit. The maximum past service base plan credit is 20 years. Previously, a participant could only earn a maximum total (past and future) base plan credit of 20 years.

There has also been a change in the eligibility of non-active participants for disability benefits. A participant is eligible if he has accrued 10 vested credits and has earned some credit in the plan within the two-year period prior to the date he became totally and permanently disabled.

The fund office expects to have all retro-active benefit payments included with the December 1985 pension checks.

The trustees are pleased to be able to make these improvements, which come on the 20th anniversary of the National Roofing Industry Pension Plan. These improvements will benefit all roofers regardless of whether they are active or retired, or regardless of age or length of service.

Steinmetz hopes the Plan will continue to grow and will be able to offer more benefit improvements in the future. He also hopes to see more locals joining the Plan; the higher level of contributions would allow the Plan to offer increased benefits to participants.



A Continuing Education Recognition Program

The NRCA Academy of Roofing Contractors program fosters the pursuit of excellence in roofing systems installation by encouraging participation in education and training programs by all levels of roofing contractor company personnel. Companies whose employees are involved in a specified amount of training are awarded a plaque in recognition of membership in the Academy of Roofing Contractors.

It is the program's basic tenet that education and training of company personnel lead to improved job performance. To remain competitive in the industry is to install quality roof systems, and this can only be achieved through knowledge of the systems and through good workmanship. Attainment of the membership in the Academy of Roofing Contractors attests to a company's commitment to this goal.

For a detailed requirements brochure and an enrollment application, contact the NRCA Education Department.

Members, Academy of Roofing Contractors

AAA Roofing Company Indianapolis, Ind.	Clark Roofing Company Broadview, Ill.	L.R. Lloyd Company Uniontown, Pa.	Roth Bros., Inc. Youngstown, Ohio
Abernathy & Clark, Inc. Tupelo, Miss.	Culbertson Company Manassas, Va.	Midland Engineering Co., Inc. South Bend, Ind.	Wm. Schaus & Son, Inc. Manitowac, Wis.
Ameier Roofing, Inc. Chicago Ridge, Ill.	Enterprise Roofing & Sheet Metal Dayton, Ohio	Peninsula Roofing Co. Salisbury, Md.	L.E. Schwartz & Son, Inc. Macon, Ga.
Harold J. Becker Co., Inc. Dayton, Ohio	Charles F. Evans Co., Inc. Elmira, N.Y.	Port Enterprises, Inc. Port Lavaca, Texas	Star Roofing Co., Inc. Oakland, Calif.
Bradford Roofing & Insulation Billings, Mont.	Everett Roofing, Inc. Baltimore, Md.	Primo Roofing Co. Huntington Beach, Calif.	Upstate Roofing, Inc. Rochester, N.Y.
Carolina Roofing Service, Inc. Monroe, N.C.	Gentry Industrial Service Dublin, Ind.	Prospect Enterprises, Inc. McLean, Va.	Valley Roofing Corp. Roanoke, Va.
	Graham Roofing Co., Inc. Columbus, Miss.	Quad City Roofing Co. Madison, Ill.	Western Pacific Roofing Corp. Lancaster, Calif.

One-day programs devoted to roof performance and design considerations

Designed for architects, engineers, specifiers, general contractors, building owners, plant engineers, maintenance supervisors, and roofing contractors

NRCA Conference on Reroofing and Energy Conservation

Boston, Dec. 5, 1985

Cleveland, March 13, 1986

Philadelphia, March 20, 1986

Chicago, April 10, 1986

Program

- Roof Problem Analysis:
The Repair or Reroof Decision
- Insulation and Energy Payback
- Reroofing Options: Built-up and Modified Bitumen Systems
- Quality Control in the Application of Built-up Roofing
- Reroofing Options: Single-ply Systems
- Retrofit Details
- The Reroofing Project

NRCA Roofing Systems Conference

Salt Lake City, Dec. 12, 1985

Houston, April 17, 1986

Program

- Roof Decks
- Roof Insulation
- The Built-up and Modified Bitumen Roof Membranes
- Quality Control in the Application of Built-up Roofing
- The Single-ply Roof Membrane
- Roof Details: Protecting the Roof's Most Vulnerable Points
- The Roofing Project:
Cooperation Means Success

What past attendees have said about these conferences:

"I wish that I had gone to a conference like this a long time ago."—*specifier, Los Angeles.*

"This was the best seminar I've attended in thirty-five years. Thanks very much."—*engineer, Detroit.*

"The conference was very informative . . . will prove very helpful in specifying future projects."—*roofing contractor, Atlanta.*

"The best conference of a number which I've attended."—*architect, Washington, D.C.*

"Excellent in all respects."—*government rep., Tampa.*

For further details on the conferences and registration information, contact the NRCA Education Department, 8600 Bryn Mawr Ave., Chicago, Ill. 60631 (312) 693-0700



NRCA makes code change suggestions

by Jeff Lowinski, NRCA technical services manager

NRCRA has been working with material manufacturers and the officials of two model code organizations to simplify the task of interpreting the model codes' roofing requirements. Should the proposed changes be approved, both the Uniform Building Code and the Basic/National Building Code will feature separate sections devoted specifically to roofing. Other changes are being considered that will change the fire rating, materials and application techniques necessary for a code-approved installation.

The Uniform Building Code was developed by the International Conference of Building Officials (ICBO) and the Basic/National Building Code was developed by the Building Officials & Code Administrators (BOCA).

The principle recommendation being made to ICBO is to consolidate its code's existing roofing requirements, which are scattered throughout the present document. Also in the proposed ICBO code revisions, fire-resistance requirements for roof coverings have been compiled into a table to simplify use. The table arranges the required fire ratings according to building occupancy and type of building construction.

The proposed revisions also delete many of the non-rated roof coverings that formerly had been "grandfathered" into the code. The revisions replace these non-rated coverings with systems that have been rated by a testing agency such as Underwriters Laboratories.

Some ICBO code requirements have been updated in the proposed revisions to reflect current American Society for Testing and Materials (ASTM) requirements. Tables have been assembled that describe the design and application requirements of each roof covering material. These new tables clearly identify the minimum criteria for the application of asphalt shingles, wood shingles and shakes, tile, and built-up roofing. Each table prescribes the minimum slope and decking needed to properly install each type of roof system. The tables also describe the underlayment or interlayment each roofing system requires for moderate and severe climate zones.

Other requirements updated by the revisions include the minimum type and number of fasteners and the maximum exposures that are permitted.

Separate requirements are described in the ICBO code revisions for nailable and

proper use of base sheets, vapor retarders, wood nailers and insulation stops. Correct application rates and maximum slope limitations for cementing and surfacing materials are also included in the revisions.

The proposed revisions to the BOCA code are similar to those recommended to ICBO. Because the present BOCA code contains only brief, scattered requirements for roofs and roof coverings, a separate section on roof coverings is being proposed. The proposed new section calls for roofing materials to meet ASTM standards and to be applied in accordance with the manufacturers' printed instructions. The changes include tables that prescribe the minimum slope, underlayment, and attachment requirements for each type of roof covering. Requirements are also included for flashing construction, roof insulation, roof mounted equipment and roof drainage.

A section of the proposed BOCA revision has also been devoted to reroofing. This new section establishes separate requirements for tear-off and replacement and for re-covering. Construction load requirements and the proper reuse of existing flashings and tile are also addressed in this section.

Code changes in the works

The proposed revisions to both codes will be published during November 1985. The changes will then be discussed at hearings sponsored by the code changes committees of the two code groups. These hearings are open, and anyone may testify for or against the proposals. After the code changes committees have reviewed the testimony, they will make their recommendations to the general membership of their respective organizations. The final decision to approve the proposed code changes will be made at each group's annual meeting.

The hearing for the BOCA code revisions will be January 12-17, 1986 in Hunt Valley, Md. BOCA's annual meeting will be June 24-29, 1986 in Corpus Christi, Texas.

The hearing for the ICBO code revisions will be sometime in late January 1986 at a location yet to be determined. ICBO's annual meeting will be September 14-19, 1986 in Phoenix, Ariz.

Members of NRCA's Building Codes Committee and staff are planning to attend each of these hearings to represent NRCA members' interests on these code change issues.

When a major Midwestern roofing and insulation distributor built its headquarters in Pewaukee, Wis., recently, it had its choice of insulation and roofing systems.

But after looking over the selection, General Fiberglass Supply, Inc., chose sprayed-in-place polyurethane foam for its structural, insulation and energy conservation values.

The company's single-story 25,000-square-foot structure is roofed with about 2½ inches of polyurethane foam manufactured by the Stepan Co. of Northfield, Ill., and based on chemicals supplied by Mobay Chemical Corp. of Pittsburgh.

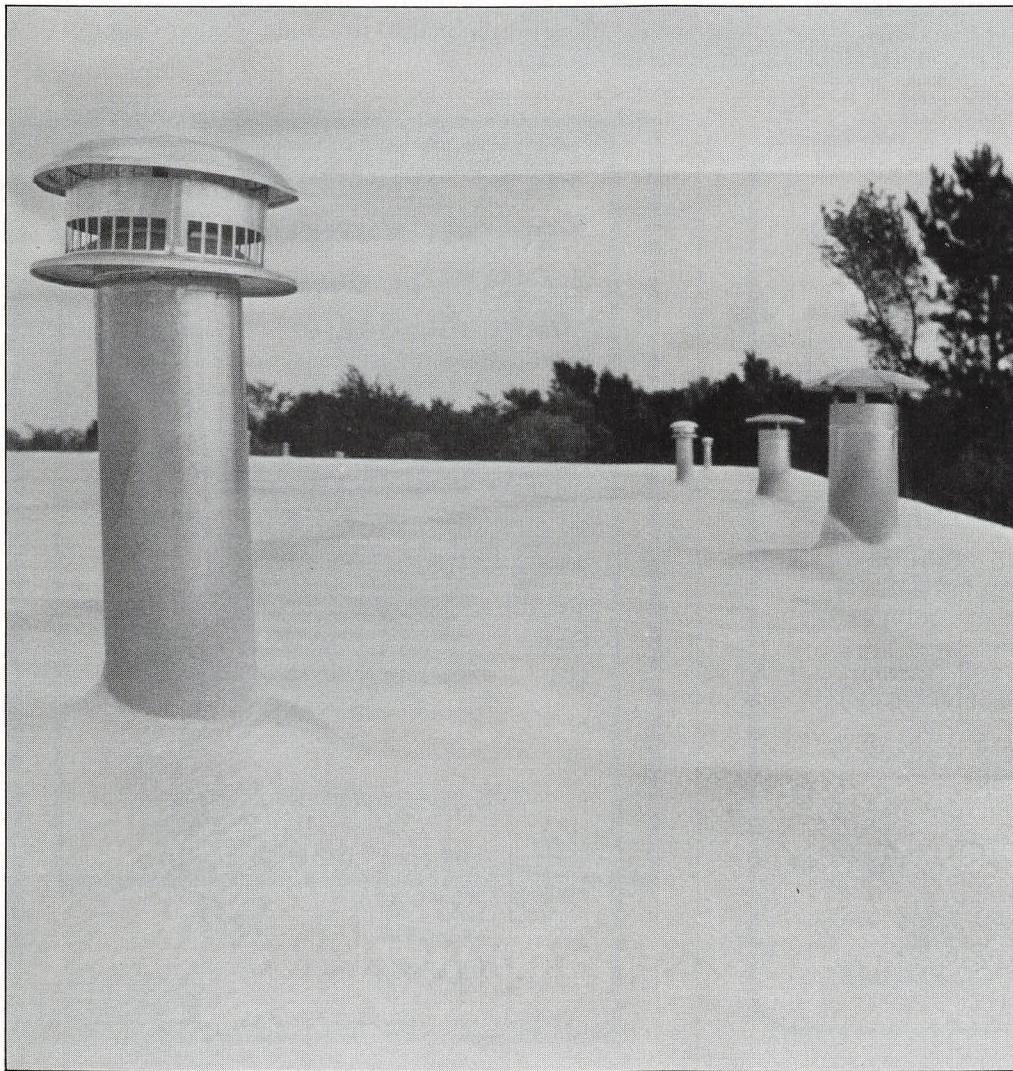
"For our purposes, a sprayed-on polyurethane foam roofing system was the most cost-effective method to cover and insulate our roof," said Les Albeck, roofing project manager for General Fiberglass. "In fact, the spray-on polyurethane saved us about \$9,000 in materials."

The rigid polyurethane's structural value

allowed General Fiberglass to use a less expensive 26-gauge metal deck. The galvanized metal deck was laid down over steel girders and acid-washed with a primer.

The foam, Stepan's RS-9300 series polyurethane with a 3-pound-per-cubic-foot density, was applied by North Central Insulation of Eau Claire, Wis. The company sprayed about 2½ inches of the foam onto the roof in two to three passes. To help protect the foam from ultraviolet ray degradation, a 40-mil layer of Ureflex, a polyurethane elastomer manufactured by Foam Systems Co. of Riverside, Calif., was applied. As final protection, a 20-mil silicone coating and roofing granules were added.

With its R-value of 18, the foam roof should continue to help General Fiberglass save money. Project manager Albeck estimates that by lowering the company's energy bills, the roof should pay for itself in 3½ to four years.



**Polyurethane
was
clear
choice
for
insulation
distributor**

Sprayed polyurethane forms a continuous water-resistant cap over the entire roof of the new General Fiberglass Supply, Inc., headquarters.

Miami advice: specify coal tar and phenolic foam

The Miami Beach Convention Center recently replaced its 1,850-square roof with a four-ply, built-up roofing system, consisting of coal tar bitumen reinforced with tarred felt. The roofing materials were manufactured by Koppers Co., Inc.

Even though Florida has been billed as the "Sunshine State," some parts still get their share of heavy rain. In fact, from May to October the city of Miami receives more rain per month than any other major American city.

To withstand this annual deluge, buildings such as the Miami Convention Center, with its 1,850 squares of flat roof area, need all the help they can get. That's why when it came time to reroof the Convention Center recently, the building's managers turned to the Koppers Co., Inc., of Pittsburgh for materials that would hold up well under heavy rainfall and severe ponding.

Anthony Spano, a sales representative for



Koppers, specified a four-ply roof assembly over a 2.4-inch layer of phenolic foam insulation for the Convention Center. "With Miami's semi-tropical climate, a large, flat roof like this one sees a lot of rain over the years," said Spano. "This particular roofing system, using these materials, has proven well for durability, strength and low maintenance throughout the past 50 years. Only a minimum amount of maintenance will be necessary."

The new roof was installed by Giffen Roofing Co. of Miami after the old roof was torn off. "Over the years, the ponding of water had caused the old roof to become saturated with water," said Spano. "Consequently, the old roof had to be completely removed down to the original concrete substrate. We removed about 84 truckloads of roof debris."

The new roof that Giffen installed consisted of four layers of tarred felt with alternating interply layers and a flood coat of coal tar bitumen. The completed roof assembly offered an R-value of 20, which helped to lower the Center's energy bills.



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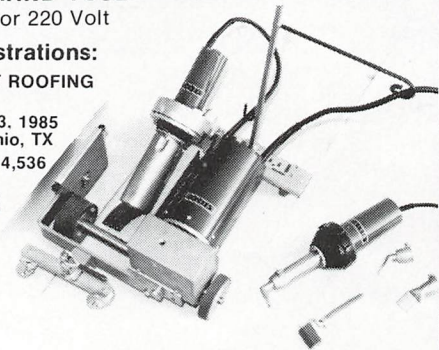
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Check #19 on Reader Service Card

Would you like to swing on a star? And help other contractors be better off than they are? Or would you like to be a pig with your safety ideas?

The Health and Safety Committee is introducing a "Safety Star" contest. The Committee is looking for safety tips from Association members and their employees to share with the industry. The ideas generated may be featured in membership mailings, tool box talks, and *Roofing Spec*, according to the Committee.

All members and their employees are eli-

gible to submit their safety innovations. The Committee is offering cash incentives for the best ideas and believes the more people involved, the better the results will be. The first prize is \$500, second prize is \$300, and third is \$100. Five \$50 prizes will also be awarded.

Contest winners will be determined by the Committee; its decisions are final. Entries should be sent to Carl Good at NRCA, 8600 W. Bryn Mawr Ave., Chicago, Ill. 60631-3502. The deadline is Jan. 15, 1986. Winners will be announced at the NRCA Convention in Las Vegas, Feb. 9-12.

Kids invited to create posters that spotlight roofing safety

NRCA's Health and Safety Committee has announced its first safety poster contest. Members' children age 17 and under are eligible to participate by submitting hand-drawn posters featuring examples of roofing safety.

"The Committee members believe that safety is everyone's business," Carl Good, director of member services, says. "They also know that this attitude is best developed early in life."

Safety, insurance and OSHA topics for new department

October marks the premier of a new *Roofing Spec* department. Called Risk Management, the new department will focus on health and safety-related issues, including safety program development, insurance cost control and government safety regulations.

The new department will also feature your ideas and experiences. If you have a safety tale to tell such as a plan for a safety program that works or an insurance rate horror story, send it in. There's probably a reader who needs the information as soon as possible. Don't worry if you don't have time to write a full-blown article. If you want, you can just send us a brief outline of your idea along with a phone number where we can reach you for follow-up information. Send your ideas to Risk Management, 8600 W. Bryn Mawr Ave., Chicago, Ill. 60631-3502.

Participants will be placed in one of four age categories. First prize is a \$100 savings bond; second prize, a \$50 savings bond; and third prize, a \$25 savings bond. All three prizes will be awarded in each category.

Children may use paint, markers, crayons, or any other drawing tool. Drawings must be on posterboard, and measure at least 8½ by 11 inches.

The deadline for entries is Jan. 1, 1986. Posters should be sent to Carl Good, NRCA headquarters, 8600 W. Bryn Mawr Ave., Chicago, Ill. 60631-3502. The artwork will be judged by the Health and Safety Committee members on the basis of creativity, originality and the safety message selected.

Winners will be announced at the NRCA Annual Convention in Las Vegas, Feb. 9-12.

There's
safety in
sharing

IN BRIEF

- **NRCA manufactures Spanish *Passports*.** One of NRCA's most popular publications, *Passport to Safety*, is now being translated into Spanish. The translated version will be available by the end of the year. The Spanish *Passport* is a result of many member requests for safety information specifically for their Spanish-speaking personnel, according to the Member Services Department. The new *Passport* will be offered at the same price as the English version: 1 to 24 pamphlets are \$1.50 each for members, \$2 for non-members; 25 or more are \$1 each for members and \$1.50 for non-members.

COMING EVENTS

(For inclusion of events, address all correspondence to:

Roofing Spec "Coming Events"
8600 Bryn Mawr Ave.,
Chicago, Ill. 60631).

Oct. 15-18

CMC '85 and A/E Systems
The Computer Show for Contractors
and Designers
Houston, Texas

Oct. 17-18

Regional Seminars & Table Top
Displays
Urethane Foam Contractors Association
St. Louis, Mo.

Oct. 23-25

29th Annual Polyurethane Technical/
Marketing Conference
Society of the Plastics Industry
Reno, Nev.

Oct. 24-25

Regional Seminars & Table Top
Displays
Urethane Foam Contractors
Association
San Francisco, Calif.

Oct. 28-Nov. 1

Infrared Scanning Courses
Infraspection Institute
South Burlington, Vt.

Oct. 29

One-day roofing seminar
WatPro Corp.
East Carolina University
Greenville, N.C.

Nov. 1

Avoiding Liability and Litigation
Construction Specifications Institute
Philadelphia, Pa.

Nov. 5

One-day roofing seminar
WatPro Roofing Systems

University of Lowell
Hartford, Conn.

Nov. 6

One-day roofing seminar
WatPro Roofing Systems
University of Lowell
Andover, Mass.

Nov. 6-8

Standing Seam Metal Roofing Systems
Roofing Industry Educational Institute
Seattle, Wash.

November 7-8

Seventh Annual Crane Conference
Crane Inspection & Certification
Bureau
Orlando, Fla.

Nov. 10-13

36th Annual Convention
Midwest Roofing
Contractors Association
San Antonio, Texas

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PAS publishes salary surveys

Personnel Administration Services (PAS), Inc., has published four wage and salary surveys that cover 125 executive, professional, technical and non-union craft positions in the construction and design/building industry.

Each survey contains over 100 pages of wage and salary information. The material is summarized using a variety of categories and a number of sub-breakdowns to provide a multi-dimensional look at any given position.

The publications are: *1985 Executive Compensation Survey for Contractors*, *1985 Salary Survey of Construction/Construction Management Positions*, *1985 Consulting Engineering-Design Salary Survey*, and *1985 Merit Shop Wage and Benefit Survey*. Brochures describing each of the PAS surveys are available at no cost.

Check #20 on Reader Service Card

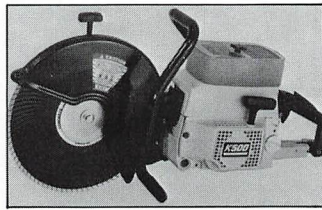
Partner markets lightweight saw

Partner® Industrial Products is marketing a new lightweight cut-off saw.

The Partner K500 saw weighs 16.95 pounds without its 12-inch blade. The saw features a three-stage filter mounted on top of the unit, electronic ignition, reversible cutting arm for cutting close to walls, an air-cooled two-stroke engine, de-vibrated handles that reduce shimmy and shake, and a 3-cubic-inch cylinder displacement.

The saw can be used for cutting corrugated steel roof panels and other ironwork as well as concrete floors, curbs, gutters, sidewalks and driveways.

Check #21 on Reader Service Card



Dow introduces Lightguard system

The Dow Chemical Co. has introduced an insulation system that incorporates a factory-applied facing, which eliminates the need for additional ballast.

The Styrofoam™ Lightguard™ system consists of 2-foot-by-4-foot panels with a 3/8-inch-thick, latex-modified concrete facing that is applied to the top surface. The facing provides 4.5 pounds per square foot of ballast. The panels feature tongue-and-groove edges that interlock to enhance the system's stability. No other fastening is required.

While not intended for roof areas carrying general foot traffic, the surface does form a protective walkway for light roof maintenance traffic. Heavier traffic can be accommodated with the addition of concrete pavers.

Dow Chemical has published a six-page brochure that describes the system.

Check #22 on Reader Service Card

Company expands roof equipment line

The Julien P. Benjamin Equipment Co. has added three new products to its roofing equipment line.

The Reddi 30-gallon patch kettle is designed for small jobs. The unit weighs 175 pounds and fits through a 36-inch opening for high-rise or penthouse jobs. The kettle, which is fired with LP gas, is insulated and comes fitted with two semi-pneumatic tires, a bi-metal stem thermometer and a 2-inch, full-flow drain cock.

The Reddi 48-inch 5-N-1 dispensing machine can dispense hot materials in five different modes. A lever controls material flow. The unit can lay a solid coat of material 48 inches wide, or lay down a series of ribbons for strip mopping. The machine also dispenses hot materials and lays a 36-inch felt or 36-inch-wide flood coat for gravelling. The 44-gallon unit features a front axle that moves both front tires together to keep the machine rolling in a straight line.

The Reddi aluminum feltlayer has a 42-gallon capacity and weighs approximately 100 pounds. The unit can be operated from either side and moves forward for operator safety. Ply line markers are included and can be used to apply a 36-inch flood coat for gravelling with a two- or three-wheel gravel spreader.

Check #23 on Reader Service Card

NEW IDEAS

Sheathing expands Foamular line

UC Industries has developed an extruded polystyrene, rigid-foam insulation for commercial and residential sheathing installations.

The Foamular® insulating sheathing has an R-value of 3.125 for a 7/8-inch thickness. The material withstands water leakage, humidity, condensation and freeze-thaw cycles. The sheathing, available in 4-foot-by-8-foot or 4-foot-by-9-foot panels, also offers impact resistance with a compressive strength of 25 pounds per square inch.

UC Industries, together with Associated Foam Manufacturers, has developed a tapered roof system that uses extruded polystyrene insulation. The Contour Taper Tile®X system adds slope to drain roofs, while providing an R-value of 5 per inch.

A series of free brochures that describe the Foamular line is available from UC Industries. The publications include a bulletin that describes the effects of moisture on Foamular and other rigid foam insulations (bulletin UC-191) and a brochure detailing the company's low-density Foamular 150 (bulletin UC-150).

Check #24 on Reader Service Card

Hiab introduces lightweight crane

Hiab Cranes & Loaders, Inc., has introduced a new lightweight crane.

The Hiab 070 crane weighs 2,120 pounds—440 pounds less than similar cranes in the same class. The unit, which is capable of lifting 54,000 foot-pounds, folds to less than 79 inches high in its travel position. The hook version of the Hiab 070 requires 24 inches of space between the truck bed and the truck cab.

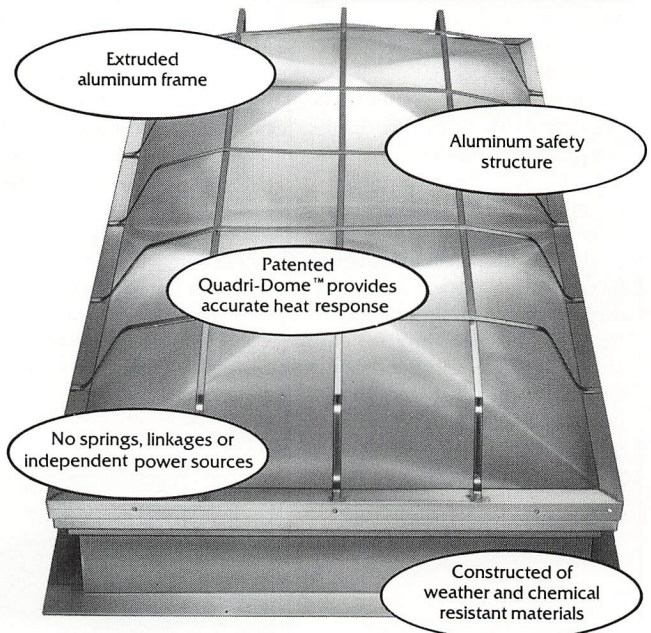
The unit's controls are arranged in the same sequence on both sides of the truck, reducing the risk of automatic reflex errors when working the crane. A guard protects the controls from unintentional operator movement.

The crane's outriggers are also operable and adjustable from either side. The outriggers move on ball-bearing rollers and can be adjusted to a spread of up to 14.9 feet.

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Kornylak offers 5-mode dispenser

The Kornylak Corp. has developed a phenolic foam dispensing machine that handles a wide range of viscosities and formulas.

The machine consists of three basic components: a mixing head that comes with provisions for either pour or spray, a laydown, and a traverse or boom mounting. A control console and matching power and pumping cabinet complete the system.

The machine's maximum dispensing capacities range from 120 pounds per minute for 5,000-CPS-viscosity foam to 20 pounds per minute for 100,000-CPS-viscosity foam.

The same dispensing head can be used for metering, mixing and dispensing either four-component, low-viscosity floral formulations or three-component, high viscosity insulating foams. Head pressure is adjustable for optimum laydown with either pour or spray applications.

Check #26 on Reader Service Card

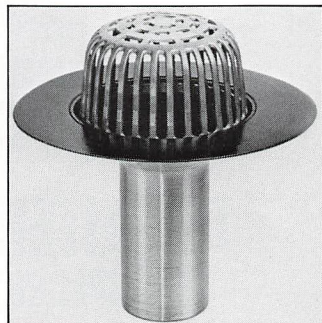
U-Flow markets seamless drains

U-Flow, Inc., is marketing a line of roof drains that are spun from continuous pieces of seamless aluminum.

The drains have no soldered joints or mechanically fastened rings. They are available in funnel or straight styles for smooth or gravel surfaces. The drains can be used on single-ply, inverted and BUR systems.

Constructed of .091 aluminum, the drains feature primed flanges that are ready for use. The funnel drains come with integral gravel stops to permit flood coating and gravelling up to the stop rings. Funnel drains for smooth surfaces come with cast aluminum strainers. For inverted roof systems, the drains can be equipped with ballast guards, gravel stops, cast-aluminum strainers and flow-control weirs.

Check #27 on Reader Service Card



Acrylic mastic sets in 10 minutes

A quick-setting acrylic elastomer roof mastic has been developed by Chemical Coatings & Engineering Co.

The product, designated AF-130-QS, resists water flow or disruption as soon as 10 minutes after application. The mastic may be applied over uneven or rough surfaces such as urethane foam without excessive moisture causing the mastic to run into low areas and leave the high spots unprotected. AF-130-QS may also be used in high humidity or fog.

The company cautions that while the mastic's quick-set properties allow it to resist moisture, it does not dry faster. The applied material should not be walked on or otherwise disturbed until completely dry. Materials should not be applied when a soaking or prolonged rain is imminent.

Check #29 on Reader Service Card

Jack converts ladders to scaffold

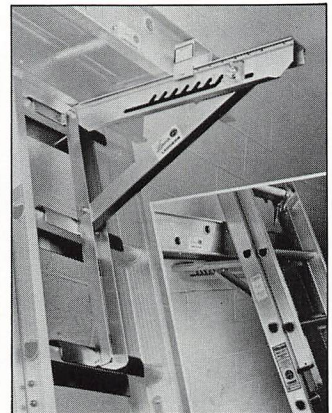
A jack that allows scaffolding to be installed between extension ladders is being marketed by Lincoln Ladders, Ltd.

The Lincoln Ladder Jack weighs 7 1/2 pounds and doesn't require tools for assembly. The jacks can be placed either inside or outside the ladder face using nine pitch adjustments. The arm track plank stop also adjusts to nine positions for varying scaffolding plank widths.

The jack features quick-change lock nuts with nylon stop nuts. Rung grips are heliarc-welded and riveted with aluminum rivets. A rung-lock bolt fastens the jack to the ladder.

The Lincoln Ladder Jack is manufactured from extruded material. All unit parts are interchangeable.

Check #28 on Reader Service Card



Job cost program expands options

Marathon Management Systems, Inc., has introduced a new job cost report generator.

The product is designed for contractors who require special reports beyond standard formats. The fully integrated program is menu-accessed and features math capabilities, graphics, user-defined selectivity and varying report levels. Contractors can use the system to compare original and current estimates to actual costs by job or function. Users can also generate a list of cost codes.

Check #30 on Reader Service Card

Allroof releases warranty details

Allroof International, Inc., has published a document that details installation procedures for the Belroof SD-4 modified bitumen roofing membrane.

The publication comes in a three-ring binder and includes specification and application details. Information on the Allroof Approved Applicator Program and the company's warranty program is also included.

Allroof has also announced the availability of a new limited roofing system warranty. This 15-year warranty is issued to approved applicators who install the Belroof system according to the company's guidelines. All installations must be inspected by Allroof International or an authorized agent for the warranty to be valid.

Check #31 on Reader Service Card



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Check #17 on Reader Service Card

Rockcor develops sealant roof tape

Rockcor, Inc., has developed a sealant/adhesive tape that is designed for use with EPDM membrane roofing.

The tape is intended primarily for splicing EPDM membrane sheets. It can also be laminated with a strip of EPDM and used as a two-ply, self-adhering cover to seal the anchor bars that hold the membrane to the roof substrate. The two-ply tape can also serve as a patching material.

The tape is currently produced by Rockcor and sold to EPDM manufacturers for distribution under their brand names.

Check #32 on Reader Service Card

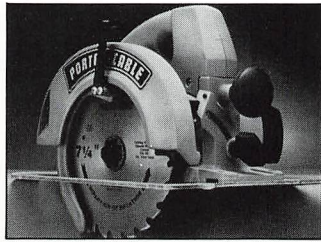
Porter-Cable offers circular saw

The Porter-Cable Corp. is marketing an industrial-grade, 7 1/4-inch, top-handle circular saw.

The Model 315-1 saw is designed with a kick-proof clutch to help eliminate saw kick-back if the blade should catch. The saw also features ball- and needle-bearing construction, a heavy-duty wrap-around base and extra-large control knobs for positive set-up. An external gear lubricator allows the gears to be lubricated without dismantling the unit.

The saw also has a single sight line on straight, angle or bevel cuts and is double-insulated for operator safety. The unit is powered by a 13-amp, 5,800-RPM motor. The saw comes with a combination saw blade, blade wrenches, an operating manual and a parts list. A rip guide and steel carrying case are optional.

Check #33 on Reader Service Card



Company develops 'sandwich' system

Minnesota Diversified Products, Inc., has developed a new roofing insulation system that protects the roofing membrane while reducing the problem of insulation flotation.

The CertiLite™ system sandwiches the membrane between two layers of insulation, leaving 1 inch of insulation above the membrane, which is held down by ballast, reducing the chances that the insulation will float when water ponds on the roof.

The insulation's bottom layer is tapered RayLite® extruded polystyrene, a 4 3/4-inch-thick board. The board has an R-value of 4 per inch and provides the bulk of the system's insulating value. The membrane is covered by a 1-inch-thick layer of Certi-Foam®, a high-density extruded foam that protects the membrane against foot traffic and environmental damage. Certi-Foam has an R-value of 4 per inch, giving the entire system an R-value of 25 at a cost of approximately 89 cents per square foot.

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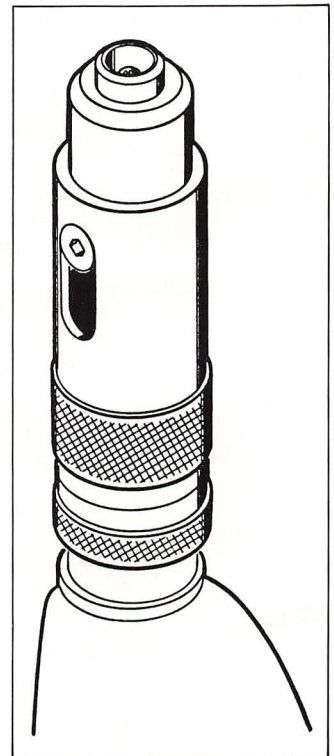
Shortool assists in driving screws

Construction Fasteners, Inc., has introduced a new assembly tool.

The Shortool is designed to hold screws in place and prevent the fastener from walking or wobbling during driving. The unit features a retaining ball nosepiece that holds screws of any length. A depth-setting adjustment allows for accurate depth placement.

The Shortool can be used with AEG, Black & Decker and Rockwell electric-powered drivers.

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CLASSIFIEDS

Place a classified ad in *Roofing Spec* for 50 cents per word. There is a minimum charge of \$20. Boxed or display advertisements are available in the classified section for \$40 per inch (one inch minimum). Ads using blind boxes available at no additional charge to NRCA members; non-members add \$10 to total order. Send ad copy and payment to: Advertising Manager, *Roofing Spec*, 8600 Bryn Mawr Ave., Chicago, Ill., 60631

PROCOUNSEL

ROOFING PLACEMENTS NATIONWIDE

I place roofing professionals with manufacturers, distributors, roofers and consultants. Fees paid by employer. All information handled in strictest confidence. Contact Buzz Taylor at 800/545-5900 or 214/741-3014.

WANTED

OPERATIONS MANAGER

Leading San Francisco Bay-area roofing contractor seeks top-notch operations manager. Must have long and successful track record in full charge of all roof, yard and equipment operations for a substantial roofing contractor. Top salary and incentives. Send resume to our consultants: Popell, Inc., 625 Ellis St., Suite 301, Mountain View, Calif. 94043.

MANAGER WANTED

If you are interested in a long-term position with superb growth potential with one of the nation's largest and best run roofing operations, then this may be for you. But are you for us? We are only interested in the best, most aggressive people in the industry. Vast roofing knowledge in all phases, including estimating, management, field relations, negotiations and labor relations. Knowledge of BUR and single-ply mandatory. Excellent benefits. Equal opportunity employer. Send resume to the Hartford Roofing Co., Inc., P.O. Box 444, Glastonbury, Conn. 06033.

SALES REPS WANTED

CPE single-ply system needs sub reps in the Southeast. Salary and commission or commission. Send replies: Watertite Products, Inc., 4255 Laurel Brook Drive, Smyrna, Ga. 30080; 404/956-8911.

COMMERCIAL ROOFING ESTIMATOR WANTED

Commercial roofing estimator with new and reroof experience required. Good salary, bonus plan and company fringes provided. Excellent working and living conditions. Send resume to Universal Roofers, Inc., Attn: Dan Gorman, P.O. Box 20627, Phoenix, Ariz. 85036-0627.

ROOFING MANAGER

Successful roofing contractor wants to communicate only with the best in the business. Candidates must have very successful experiences in industrial and commercial roofing sales. Opportunities available on West Coast that are unique and lucrative. Send work history and objectives to Speranza Management Consultants Co., 66 Eastfield Drive, Rolling Hills, Calif. 90274.

COMPANIES WANTED

We have cash to buy roofing and sheet metal companies. Should have sales of \$1 million. Will tailor buyout to suit seller. All responses kept confidential. Send replies to Box 4B, *Roofing Spec*, 8600 W. Bryn Mawr Ave., Chicago, Ill. 60631-3502.

ROOFERS CRANE FOR SALE

National series 600 truck-mounted crane; 101-foot reach; 12 1/2-ton capacity; on 1980 Ford L8000 diesel truck. \$59,000. Runnion Equipment Co., 7950 W. 47th St., Lyons, Ill. 60534. Large inventory of new and used equipment available. 800/824-6704, in Illinois 312/447-3169.

ROOF CORE

Roof core sampler; "C.R.R.E.L."-type; 1 7/8-inch core. Hardened steel jaws; compact weight less than 6 pounds. \$135 plus \$8 shipping and handling. For details contact Autrey Steel & Machine, P.O. Box 40304, Tucson, Ariz. 85717. Phone 602/623-3444.

MAILING LIST AVAILABLE

Mailing list of schools, government agencies, industries with leaky roofs in United States and Canada. Sulmac, manufacturer of water diverters; 413/533-5347.

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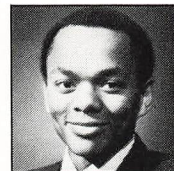
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Guidelines written for leak-free A/C

by Bob LaCrosse



NRCA recently finalized and released new guidelines for roof-mounted outdoor air conditioner installations. The guidelines have been published in a 24-page pamphlet that is small enough to fit easily in a back pocket. The publication is the result of two years of work by technical representatives from NRCA, the Air Conditioning and Refrigeration Institute (ARI) and the Sheet Metal and Air Conditioning Contractors National Association (SMACNA).

The pamphlet describes good construction practices for the interface between the roof and the air conditioning units or their piping, electrical wiring or sheet metal duct work where these elements pass through the roof. Guidelines are provided for curbs, roof penetrations and sealings. The information is not intended to serve as a standard, warranty or certification, however.

In practice, the guidelines will supplement the air conditioning unit manufacturer's specific installation instructions. The pamphlet will give general advice, while the specific requirements of each installation will depend on the circumstances, job conditions and manufacturer's specifications. For more detailed information, the guidelines refer users to *The NRCA Roofing & Waterproofing Manual*, the *SMACNA Architectural Sheet Metal Manual*, HVAC Duct Construction Standards and the National Electrical Code.

Groups meet to study problems

The development of the pamphlet was prompted by the frequent occurrence of leaks in rooftop air conditioning unit housings. In 1982, representatives of ARI were asked to meet with the NRCA Technical Operations Committee to review and discuss the problem. As the representatives of the two groups examined the situation, they found that:

- curbing is normally installed by the mechanical contractor before the roofing is applied; however, the actual air conditioning equipment is not in place before the roofing is installed;
- generally, the curbing used is not provided by the equipment manufacturer, and problems in curbing design or assembly sometimes make waterproofing impossible;
- design problems usually appear within the first few months after installation, while problems caused by abuse or damage show up much later; and

Guidelines For Roof Mounted Outdoor Air-Conditioner Installations



Prepared by:

Air-Conditioning and Refrigeration Institute



NATIONAL ROOFING CONTRACTORS ASSOCIATION

Sheet Metal and Air-Conditioning Contractors National Association



- in the majority of cases where leaking units were installed because the equipment manufacturers were unaware of the problems, roofing contractors were the first ones called to make the necessary repairs.

To improve this situation, ARI and NRCA formed a joint technical liaison committee. The committee prepared text and details for roof-mounted equipment curb criteria, unit installations, external connections (which included exterior duct closures and connections to equipment), electrical piping and drains.

Because of the importance of the duct details, SMACNA was invited to assist in finalizing the document.

The final document, printed in pamphlet form, represents the combined expertise of NRCA, ARI and SMACNA. I believe that by following the guidelines contained in this pamphlet, workers will be able to avoid the roof leaks that have resulted in the past from improper air conditioner installation.

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