

Quick Reading in Brief

European Plant

Firestone's first manufacturing facility in Europe is under construction in Belgium. The first stage consists of a plant for associated offices and services, costing over \$10 million. The Tessenenderlo factory will initially produce rubber hose for domestic appliances. Several orders, including orders from Saab and Volkswagen,

Louisville, N.C. Plant

Today reported that a multi-product manufacturing plant struck since April 1 by members of the union. Management could not offer any explanation expected to last.

Metrication Symposium

Symposium on "Metrication—Managing the Change" will be held in Washington, D.C. during the 77th Annual Meeting for Testing and Materials (ASTM). The symposium will be held at the Shoreham and Sheraton Park hotels. It is sponsored by the National Standards Institute, and American engineers, scientists and other professionals interested in materials and products are expected to attend.

Retail Sales Combined

Firestone has combined its St. Louis wholesale and retail sales marketing efforts in the area, according to a report. The combined district serves all of Illinois and eastern Missouri. Charles E. H. will head the combined district. Ned H. H. district, has been named manager of the

Innovate Far East

Firestone Co., international manufacturers of printing and roll coverings, in conjunction with Coates Ink-Maker, announces installation and manufacturing of printers' rollers in Hong Kong and Kuala Lumpur. 35 Bingham facilities throughout the world.

Starts N.J. Hard Rubber Works

Firestone's Division of Amerace Corp. will close a variety of extruded and molded hard rubber battery components. Marginal profitability on the division for the closing. The firm will consolidate operations and move to its new Johnson City, Tenn. plant.

Move Into Gold

Firestone consists of collecting thousands of pounds of scrap by its computers, and selling it—for as much as \$100. Goodyear's head paper collector, Chaker, has collected 38,000 pounds of data card and print-out paper—collected 38,000 pounds—and we've only

'Structural Foam News'

Union Carbide Corp. will cover a wide

10th U.S. Fatality

Firestone Plastics Finds 1st PVC-Related Cancer Death

AKRON, Apr. 16—Firestone has reported that the death in 1969 of a worker at its Pottstown, Pa., plastics plant is apparently "related to angiosarcoma," a rare form of liver cancer suspected of being caused by exposure to vinyl chloride monomer, a precursor of polyvinyl chloride (PVC).

This is the first death at Firestone attributed to the disease, and was discovered as the result of a continuing study by Firestone and government health agencies of deceased employees' medical records.

(For details of government actions to reduce worker health hazards, see earlier story, p. 11 in this issue.)

The deceased Firestone employee brings the known toll among U.S. PVC workers to 10. He was employed by Firestone Plastics for 20 years in various jobs involving PVC production.

Firestone has initiated a medical surveillance program at both the Pottstown plant and another it operates at Perryville, Md. Tests include pulmonary function and blood tests, as well as complete physical examinations.

Other deaths—since B.F. Goodrich triggered the investigations by reporting the mysterious incidence of deaths (four) at its Louisville, Ky., PVC plant—include one more at Louisville, three

deaths at a Goodyear plant in Niagara Falls, N.Y., and another at a Union Carbide plant in South Charleston, S.C.

U.S. vs. VC Monomer

WASHINGTON, D.C.—Another government agency has entered the fray against vinyl chloride. The Environmental Protection Agency (EPA) has asked insecticide manufacturers to voluntarily halt the use of the suspected carcinogen as a propellant in aerosol "bug bombs."

Hold it! Yet another government agency wants into the act. The Food and Drug Administration (FDA) announces a nationwide investigation of vinyl chloride as a propellant in aerosol drug and cosmetic products (hair sprays in particular).

And, the FDA is looking into the use of PVC food packaging containers. In May of 1973, the use of PVC bottles for liquor was quietly terminated, when it was discovered that vinyl chloride was leaching into the liquor from the containers.

Now, the investigation will be broadened into other food items.

DOT Names Eight

New Vehicle Safety Councilors

By RPN Washington News Bureau

WASHINGTON—The Department of Transportation has announced the appointment of eight new members to the 22-member National Motor Vehicle Safety Advisory Council.

The council, set up under the National Traffic and Motor Vehicle Safety Act of 1966, advises DOT on the overall

motor vehicle safety standards program, including tire standards.

Named to the council for three-year terms expiring December 31, 1976 were Harry H. Brainerd, Vehicle Equipment Safety Commission, Washington, D.C.; Colver R. Briggs, Ford Motor Co., Dearborn, Mich.; Senator John D. Caemmerer, New York State Senate, Albany, N.Y.; and Dr. B. J. Campbell, University of North Carolina, Chapel Hill, N.C.

Also, Mrs. Julie Chandler, *Woman's Day Magazine*, Birmingham, Mich.; Richard L. Day, Peterson Publishing Co., Los Angeles, Calif., and George Hildebrand, Pratt Institute, Brooklyn, N.Y.

Named to the unexpired term of the late Louis Von Witte, which expires December 31, 1975, was Emmett E. Nixon, Hercules, Inc., Southfield, Mich.

Dale C. Horne, an attorney for the

Taylor Assoc. Comes to Grips With a Process

WADSWORTH, Ohio, Apr. 8—Taylor Associates R&D firm announces development of a new manufacturing process

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recommendations on storage, mixing, processing, extrusion, calendaring, curing and aging. A new appendix is appended, which lists some processing problems in compounds based on Du Pont VINON® E-60C and corrective procedures. For a copy of the report, contact your Du Pont Representative or write to Wilmington.

In recent years, Du Pont's T-Neoprenes have emerged with a reputation for their easier, smoother processing uses less power, and their dilutability extends polymer. If you would like to learn more about these advantages—ask your local Du Pont contact for a copy of the T-Neoprene (on Neoprene T types) and learn what converting requirements to Du Pont's T-Neoprenes can mean to you in terms of energy and material shortages.

Du Pont 2744 and NORDEL 2722 are now available in pellet form—this means lower prices. The introduction of these highly uniform pellets arms squarely at your mixing problems. Our tests show that pellets provide improved day-to-day mixing reliability and fewer cycles than the previous friable or compact bale forms. They also offer an opportunity to consider bulk shipping, storage and handling, bag and weighing. See your Du Pont Representative and let's discuss how your mixer capacity and eliminating some midnight calls.

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Recent developments in products and technology from Du Pont's Elastomer Department. If you are interested in any of the items highlighted in this newsletter, contact your Elastomers Technical Representative, or Du Pont, Rm. 23819, Wilmington, DE 19898. Only written inquiries by stating the item number and name of this publication.



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tion" of the driver (as do seat belt systems).

Air bags would be required to provide protection for front seat occupants in 30-mile-per-hour barrier crash tests.

Under the proposed rule, air bags would not be required for rear-seat occupants. Seat belts for front seat occupants would become optional, provided cars could meet a rollover test in which occupant safety was assured by the passive restraint system. If cars could not pass such a test, seat belts would still be required.

Legal maneuvering by auto makers and a resulting court order had rebuffed earlier attempts by NHTSA to mandate passive restraint systems such as air bags by August 15, 1975.

NHTSA also proposed in a separate notice that passive restraint systems that afford occupant protection in crashes at speeds up to between 45 and 50 miles per hour be made mandatory on cars built after September 1, 1980 (1981 model year). Closing date for comments on the 1981 model year proposal is September 19.

URW Demands Stricter Vinyl Chloride Rule

AKRON, Apr. 12—Peter Bommarito, United Rubber Workers (URW) International president, today called on Assistant Secretary of Labor John Stender to revise the emergency temporary standard limiting worker exposure to vinyl chloride.

Stender's Occupational Safety and Health Administration (OSHA) issued a hurry-up limitation of 50 ppm (parts per million) concentration of vinyl chloride in air on April 5.

Several hundred rubberworker delegates gathered in Washington, D.C., the following week, on Apr. 10, to devise some strategy for getting even more stringent limits placed on exposure.

The National Institute of Occupational Safety and Health (NIOSH) had earlier recommended "zero exposure," that is, workers who are exposed to even trace amounts of vinyl chloride would have to use protective clothing and respirators with self-contained air tanks.

According to Bommarito, "Our evaluation of past animal studies had shown that the 50 ppm concentration subjected workers to a serious cancer risk to many body organs, including the liver."

He added, "We urge that the emergency temporary standard be immediately revised to include the NIOSH work practice and medical surveillance recommendations."

The URW has a further meeting scheduled on Apr. 22 at the AFL-CIO Building in Washington, where Bommarito plans to enlist support from industrial unions outside the URW.

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Federal Limits on Exposure To Vinyl Cl Held Inadequate

By R. S. GRIMSHAW, JR.

Hospital Tribune Staff

WASHINGTON—Actions of several Government agencies to limit exposure of industrial workers and consumers to vinyl chloride have come under attack for not going far enough.

Vinyl chloride, a gas used to make the common plastic polyvinyl chloride, has been associated with cancer in studies of employees at the B. F. Goodrich Chemical Company in Louisville, Ky., and in animal experiments. Seven cases (six fatal) of a very rare tumor, angiosarcoma of the liver, have been found among workers at the Goodrich plant, and 23 of 271 employees screened were found to have abnormal liver function.

The decision of the Occupational Safety and Health Administration (OSHA), part of the Department of Labor, to lower the permissible exposure for vinyl chloride workers from 500 to 50 ppm, under a temporary emergency rule is drawing fire from several quarters, despite the agency's proposal of a future permanent standard that would bar all exposure.

"We have no information concerning any safe level," said Dr. Irving J. Selikoff, director of environmental medicine at Mount Sinai School of Medicine. "I don't think that I would, from an ethical point of view, find it reasonable that I ask other people to be exposed to a chemical that I know can produce fatal cancer."

Closed Systems Proposed

Dr. Selikoff endorsed the proposal put forth by Dr. Marcus M. Key, director of the National Institute for Occupational Safety and Health (NIOSH), that would require vinyl chloride to be handled in "closed systems," with no permissible exposure level allowed.

Lewis Beliczky, director of industrial hygiene for the United Rubber Workers Union, which represents many vinyl chloride workers, said, "I think the action of the Department of Labor in establishing— at this time, with the knowledge they have—an emergency standard of 50 ppm is capricious. I think they are unnecessarily putting workers at risk."

"We're not talking about a group of people who have never been exposed to vinyl chloride," emphasized Dr. Sidney Wolfe, head of the Health Research Group, a public interest group that has been actively seeking a ban on industrial and consumer exposure to vinyl chloride. "We're talking about a group of people who have been exposed to a lot of it, and we don't know at what point in time a little bit more will be enough to cause cancer."

Alexander J. Ries, a senior OSHA official, responded that legal requirements necessitate the 50-ppm emergency standard. "There's no question that if we promulgated as a temporary emergency standard the NIOSH recommendation, without adequate scientific data to back it up, it would be challenged in court, and unless we could

Available scientific data, from the animal experiments of Prof. Cesare Maltoni, of the University of Bologna, Mr. Ries maintains, have so far not shown a cancer risk at 50 ppm.

Dr. Selikoff cautioned that Professor Maltoni's negative findings at 50 ppm, because of the small number of animals involved, "are of limited utility."

Vinyl chloride is also present in several aerosol consumer products as a propellant, particularly in certain pesticides and hair sprays.

Jurisdiction over the substance in consumer products is split among three agencies—the Environmental Protection Administration (pesticides), the

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vels of vinyl chloride

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Federal Limits on Exposure To Vinyl Cl Held Inadequate

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FDA (hair sprays), and the Consumer Product Safety Commission—all of which have been petitioned by the Health Research Group to halt the use of the gas in consumer products.

EPA has asked manufacturers of 23 pesticides registered as using vinyl chloride to voluntarily change to another propellant, as makers of five

The FDA is also studying consumer use of vinyl chloride and has asked Clairol, Inc., to recall its Summer Blonde and Miss Clairol aerosol hair sprays, both of which contain the substance as a propellant. The company is complying with the request, although it maintains that the hazard to health "is extremely remote."

Clairol Statement "Misleading"

using hair spray under conditions of use, of over 250 ppm."

Dr. Selikoff noted that data are not yet available concerning vinyl chloride and risk to consumers. "What we so far know is the occupational hazard, with direct use in the polymerization process," he emphasized. "We do not know that the cancer risk will also be associated with secondary industrial use, such as in extrusion or forming, nor do we know that there will be a cancer risk associated with consumer use."

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within

able risk of injury."

Theory on Vinyl Cl Hazard Sees Liver-Harming Steps

Hospital Tribune Report

BETHESDA, Md.—A theory of the pathologic progression of the liver angiosarcomas seen in U.S. polyvinyl chloride workers has been developed by Dr. Louis Thomas, chief of the Pathology Laboratory of the National Cancer Institute, who has reviewed biopsy material taken from such workers at the B. F. Goodrich plant in Louisville, Ky., and Dr. Hans Popper, Distinguished Service Professor, Mount Sinai School of Medicine, N.Y., and a Fogarty International Center Scholar at NIH.

"We think that exposure to the vinyl chloride gas at the factories apparently causes liver fibrosis, which leads to portal hypertension, which leads to splenomegaly and hepatomegaly and eventually, in some patients, produces malignancy," Dr. Popper said.

Final Conclusions Yet

Both investigators cautioned that they are only midway in their studies and that final conclusions can not yet be drawn about the cause of the angiosarcomas among the workers.

Dr. Thomas noted that the tumors in the workers do not appear to be histologically different from most other angiosarcomas.

Dr. Popper recently returned from Germany, where there have been a number of similar cases. "Certain skin changes were found in some of the workers in polyvinyl chloride plants, and they were sent to dermatologic clinics, where the

seen. Subsequent laparoscopy demonstrated many cases of liver fibrosis. This happened more or less simultaneously with the findings in the United States."

Drs. Thomas and Popper note that development of malignancy is not always rapid. All the affected workers have had at least three years' exposure, and possibly more, to vinyl chloride gas, and, Dr. Thomas added, "I would be surprised if they were not exposed to other chemicals as well. We don't yet know for sure that it is only vinyl chloride."

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