

Plastiscope 3

SPE Retec reflects processors' worries about VCM standards

Industry concern over the OSHA standard setting low exposure levels for VCM in the workplace was forcefully demonstrated when nearly 1000 manufacturers, processors, and fabricators turned out for a Regional Technical Conference (Retec) on "VCM—The Processors' Perspective." The event was sponsored by the Society of Plastics Engineers and held in New York Oct. 31 and Nov. 1.

Attendees heard representatives of industry and government alternately attack and defend OSHA's new standard that limits VCM exposure by workers to 1 p.p.m. in an 8-hr. day, and 5 p.p.m. in any 15-min. period. The regulation goes into effect Jan. 1, unless industry court action for judicial review, and a stay, proves successful (see Nov. MP, p. 20).

Industry's position. In his keynote address, Richard Fleming, vp., Air Products & Chemicals Co.'s Chemical Group, stated three main objections to the OSHA standard: 1) the low levels called for have not been demonstrated as necessary to assure worker health; 2) there is no known technology at present to reduce concentrations in VCM and PVC plants to required levels; and 3) a loss of some 2.2 million jobs, and as much as \$90 billion off the GNP can be extrapolated if PVC and VCM producers are forced to shut down through failure to meet the standards.

Mr. Fleming called instead for adoption of the industry's own plan (as set forth by the SPI) which calls for phased reduction, over a three-year period, to 5 p.p.m. in VCM plants and 10 p.p.m. in PVC plants by the third year. His conclusion: "Unless prompt relief from the new OSHA standard is obtained, there will be severe dislocations within the PVC industry which will have a substantial economic impact on our society."

Government view. Since OSHA now finds itself having to defend its ruling in court, the agency didn't provide a speaker at the Retec but did participate in a telephone question-and-answer session from Washington. However, OSHA representatives declined to discuss decision-making processes or rationale behind the standard.

Much of the slack was taken up by Glenn E. Schweitzer, director of the Environmental Protection Agency's Office

of Toxic Substances, who called the VCM ruling the "tip of the iceberg." He made it clear that his agency will address itself to many problems associated with release of chemicals in the atmosphere—problems which are expected to grow in number, severity, and complexity in the years ahead.

According to Mr. Schweitzer, EPA's plans include establishing a standard for monomer and polymer plants, based on best available control technology, that is intended to cut emissions by 75% in resin plants and 95% in monomer plants. The standard is expected to come out in about a year, with all compliance required three years after publication. Early estimates indicate that such a standard could cause a 4% price rise for PVC—over and above price increases mandated by other regulations.

The agency also is investigating VCM's behavior in water, presumably with a view to limiting the effluents discharged into rivers and oceans, and its migration from PVC products—pipes, liners, etc.—used in drinking water reservoirs and transport systems.

Speaking for the Food & Drug Administration, Gerard L. McCowin of the Food and Color Additives Div. concentrated on the migration problem. Conceding that much still is not known about the safety of food exposed to VCM, or if VCM is carcinogenic when ingested, Mr. McCowin advised that FDA nevertheless is planning some limitations—possibly 10 p.p.m.—on residual VCM in food-contact products.

European developments. Tightening of exposure levels overseas—in Sweden, Norway, The Netherlands, and Germany to date—seemingly will close off the alternative of expansion abroad for those U.S. producers unable to meet standards here. David J. Dornick, plastics market mgr. for England's Imperial Chemical Industries, told the Retec audience that Norway, after first setting VCM standards of 50 p.p.m., then went much further and stopped all PVC production in that country pending further study. Sweden's new regulation limiting exposure to 1 p.p.m. reportedly has caused the country's only PVC producer, KemaNord, to close down. Other European countries have or are about to issue standards ranging from 25 to 50

p.p.m. According to Mr. Dornick, most plants in Western Europe already are under these levels.

What to do? The Retec was not all *Sturm und Drang*. Much of the time was devoted to hard data on how manufacturers and processors can hope to operate under OSHA standards. Discussions reviewed PVC and VCM manufacturing processes and related them to worker exposure, described methods for minimizing such worker exposure (ventilation, respirators, etc.), and covered ways to measure the amount of VCM in industrial atmospheres.

In discussing compounding techniques to minimize monomer content in PVC formulation, Dr. Wolfgang Mack of Werner & Pfleiderer Corp. suggested that the powder blending stage represents the best and easiest opportunity, within the limits of current processing equipment, for processors to cut VCM content in resin. According to Dr. Mack, equipment now is available for the efficient and economical removal of VCM at this stage. Still in the future, though, is equipment to prevent escape of exhaust gases into the atmosphere.

A concurrent exhibition highlighted equipment now on the market for detecting VCM in plant atmospheres, and protective equipment for workers. Detection equipment ranged from simple and relatively inexpensive gas chromatographs to sophisticated computer-controlled instruments capable of monitoring 16 work places.

Respirators made up the bulk of protection devices, although both industry and government spokesmen agree that use of respirators is only a temporary measure to bring companies into immediate compliance with the OSHA standard, until permanent plant upgrading is accomplished.

Summing up. Billed as "the most important Retec ever sponsored by SPI," this two-day session nevertheless left unanswered questions. Much, of course, will depend on the outcome of court actions brought by SPI and industry members (which the Industrial Union Dept. of AFL-CIO now has entered on the government's side). No matter what the court decides, however, two essential questions still will have to be resolved in the future: Will it be pos-

Plasticscope 3

able to achieve a balance between the need for worker protection and the equally important need to keep an industry alive? And, when all is said and done, will PVC be available at a price processors can afford?

Business & Industry

More activities overseas

News from overseas continues to emphasize more expansions and some new ventures, as it has throughout the year (Niw, MP, p. 138). In Japan, Mitsui Petrochemical Industries will add a new petrochemical complex to its Chiba Works, where Mitsui and Nippon Petrochemicals Co. jointly will build a 400,000 tons/yr. ethylene plant. In another joint venture, Mitsui and Du Pont Co. will build new facilities at Chiba for high density polyethylene (135,000 tons/yr.), low density PE (30,000 tons/yr.), and polypropylene (100,000 tons/yr.). September 1976 is the target date for the ethylene and HDPE plants, and July 1977 for the PP facility.

European developments are several and varied. A 25% expansion is planned for NL Industries' titanium pigment operation at Eindhoven, Norway (operated by NL's Kronos Titan A/S subsidiary). In a cooperative venture, Italy's SNIA Viscosa and Ferro Corp.'s Duich subsidiary will produce and market gel coats in Italy. This operation will use SNIA Viscosa's polyesters and Ferro's colorants and compounds.

Also in Europe, there is word that Conoco, British Steel Corp., and England's National Coal Board may join to build an ethylene plant at Teesside, where much of British petrochemical activity is centered. The ethylene cracker would have a capacity of about 500,000 tons/yr. when completed in 1978 or 1979.

As part of an expansion program begun at the start of this year, ATO Chimie is building a PP plant at Gonfreville, France. The plant, which marks the company's first venture into the PP market, will have 70,000 tons/yr. capacity when it comes on stream at the end of 1976. ATO Chimie will use Dart Industries processing technology. The company's expansion plans also include an increase of ethylene capacity at Gonfreville to 400,000 tons/yr. in 1976, and a new 150,000 tons/yr. benzene facility which will be operational in early 1975.

Finnish LDPE production will be boosted by about 35,000 tons/yr. early in 1976 when Pekema Oy completes ex-

pansion of its plant at Porvoo, raising capacity from its present 95,000 to 150,000 tons/yr. Pekema uses National Distillers & Chemical Corp. technology.

Sumitomo Chemical Co. and C. Itoh & Co. (both Japan) have joined with Brazil's state-owned Petroquisa to form Politeco-Industria e Comercio SA, which will build a 100,000 tons/yr. LDPE plant in the state of Bahia. Production is scheduled to start in 1977. And Japan's Sekisui Chemical Co. reportedly is undertaking to market its crosslinked PE foam in Italy, via a joint venture with Montedison SpA.

Resin swap plan

The Organization of Plastics Processors (TOPP) has started a program whereby members can arrange to share surplus molding compounds. Companies are asked to list unneeded compounds which they are willing to exchange or sell (for no more than 2¢/lb. over list price) in a semimonthly "swap sheet." The program, which TOPP hopes will help alleviate allocation and "black market" problems, will be coordinated by L.J. Griffith, Sunset Plastic Products, Lenexa, Kan.

Scott drops cups

Declaring that rapidly escalating prices for raw materials had adversely affected its competitive marketing position, Scott Paper Co. is withdrawing from the paper and plastic cup business. Its \$10 million/yr. cup operation at Eddystone, Pa., will be phased out. However, other foam division operations at that plant will continue.

System for PS disposable foodware

Sweetheart Plastics Inc. has introduced the Sweetheart Serving System, a method for keeping food warm during transit from central kitchen to institutional patrons. It is said to offer advantages beyond those traditionally associated with disposability—which some industry observers think may not always offset rising materials costs (see June MP, p. 50).

Moreover, the company's initial push is in hospital food service, a market which system inventor and Sweetheart's exec. vp. George Shumrak calls "most recession-proof." By 1980, he said, disposables penetration could reach 80% of this market.

The system consists of a self-powered cart—easily moved by one person—with 20 compartments for engineering-plastic trays holding dinnerware. Two sepa-

rate controls for each compartment regulate individual tray heating units—one for a main-course dish and one for a soup bowl. Result is meals "served at the exact temperature the chef intended regardless of how long it takes to transport the meal from the central kitchen." Lateral heat transfer does not take place, so that butter, for example, will not melt if placed next to hot soup.

Locating rings in the trays were designed to fit Sweetheart's Copley Square line of PS dinnerware. Trays, designed for complete enclosure of heating units to allow washing in institutional dishwashers, are molded of Noryl phenylene oxide-based resin supplied by General Electric.

Plant add-on: good sign for polyester film

Celanese Plastics Co. plans a 50% expansion of its Celanar polyester film plant at Greer, S.C., by end-1976, and its reasons for the action support earlier indications of improving economics and healthy long-term growth for the polyester film industry (Sept. MP, p. 80).

Overcapacity has ended, said Celanese executives at a mid-October announcement: the U.S. market is sold out through 1976, and open capacity from 1977 through 1983 should not exceed 11%. Film market prices will continue their upward movement, though not as steeply, until 1977, when a leveling-off is expected. During the next 10 years, the U.S. merchant market will grow "at a conservative rate of 11.5% for traditional applications, and 13.5% with the prospects of new applications presently in development." Overseas markets, meanwhile, have opened up to Celanese as a result of expiration of "key competitive patents" during the past two years. The company expects its international sales to grow from 15 to 25% of total Celanar sales between 1975 and 1977.

The U.S. merchant market for polyester film (estimated by several sources at 53,000 metric tons) is divided by Celanese as follows: magnetic tape, 25%; photobase/reprographics, 19%; electrical, 17%; packaging, 13%; metalizing/roll leaf, 9%; and miscellaneous, 17%. As for new end uses: Estimated 1980 merchant market potential for polyester film in the flexible can (retort pouch) is 4,000 metric tons; home video, 3,000; micropublishing, 2,000; wall coverings, 2,000; and substitution in packaging, 6,500.

A substantial portion of the new