



SOCIETY OF PLASTICS ENGINEERS, INC.

Palmades Section • Vinyl Plastics Division

VCM THE PROCESSORS' PERSPECTIVE

OCTOBER 31 - NOVEMBER 1, 1974

THURSDAY - FRIDAY

AMERICANA HOTEL
7th Ave. & 52nd St.
New York City

"THE MOST IMPORTANT RETEC EVER SPONSORED BY SPE"

FRIDAY, NOVEMBER 1, 1974

MORNING SESSION - ANALYTICAL DEVICES & METHODS

Moderator - Dr. Gerald J. Mantell

"Monitoring Ambient Vinyl Chloride with Infrared Analyzers"
Paul A. Wilke, Jr., President
Donald S. Lavery
Wilks Scientific Corporation

Abstract: VCM has a characteristic infrared spectrum. Thus, with recently developed selective filter infrared analyzers equipped with long-path absorption cells, it can be detected in the atmosphere and measured quantitatively in the low parts per million range. The infrared method has high specificity, provides nearly instantaneous measurements and the equipment is simple, requiring a minimum of service and maintenance. Both portable and continuous, multi-sample point infrared VCM analyzers will be described.

9:15 a.m. "A Continuous Monitor for Vinyl Chloride Monomer, Based Upon an Impregnated, Paper Tape"
Byron A. Denenberg, Vice-President
NDA Scientific, Inc.

Abstract: A self-contained, specific, low-cost, semi portable, continuous monitor for VCM has been developed. Model 7070 is based upon the use of an impregnated paper tape, supplied in convenient cassettes which produces a color reaction when exposed to VCM. Continuous recording and both audio and visual alarms are incorporated into the basic design. The monitor and the color reactions will be discussed.

9:45 a.m. "VCM - What to Expect During an OSHA Inspection"
Otto White, Jr., Regional Industrial Hygienist
U.S. Department of Labor
Occupational Safety and Health Administration
New York, N.Y.

Abstract: An in-depth view of the typical procedures utilized during an OSHA inspection to determine compliance to the Vinyl Chloride Standard, 29 CFR 1910.93a. Discussion includes recognition and identification of potential vinyl chloride sources, review of vinyl chloride monitoring program and records, evaluation of control methods used to limit airborne concentration of vinyl chloride, assessment of respiratory protection program and extent of employees knowledge in relation to exposures in excess of the standard and observation of monitoring.

10:15 a.m. Coffee Break

10:30 a.m. PANEL SESSION: Discussion of questions relative to VCM: Sample Collection and analysis.
11:15 a.m. "VCM - Current European Status"
(Speaker to be announced)

12:15 p.m. LUNCHEON - Imperial Ballroom B

FRIDAY, NOVEMBER 1, 1974

AFTERNOON SESSION - PROTECTIVE DEVICES & PROCESS OPTIMIZATION

Moderator: David W. Anderson,
Coating Division Manager
Dumet Corporation

1:30 p.m. "Respiratory Protection for Vinyl Chloride Monomer"
Ronald Varsard, Mgr. Distributor Development & Tech. Service
Scott Aviation, Division of A-T-O, Inc.
Abstract: This paper will discuss the equipment requirements relating to the Emergency Temporary Standard and the Permanent standard by OSHA on VCM. Mr. Varsard will discuss the degree of protection afforded by the various types of respirators, the trade-off associated with each, the equipment serviceability and costs.

2:00 p.m. "Respiratory Protective Devices and Protective Clothing Used in Areas of VCM Manufacture"
Karl Oelje, Production Manager
Dow Chemical U.S.A.

Abstract: Mr. Oelje will discuss information on Engineering Controls and Manufacturing Practices in both production of VCM and copolymers of vinyl chloride. He will describe possible areas of VCM exposure and the protective clothing and/or respiratory protection needed in these areas. Advantages and disadvantages of the different types of protection will be covered.

2:30 p.m. "Protective Techniques for VCM in Mixing and Extruding Operations"
Dr. Mark R. Ober, Senior Staff
Industrial Hygienist
LFE Environmental Systems

Abstract: A variety of manufacturing facilities using PVC resins were surveyed for airborne concentration of VCM. Results of this survey were presented for both lab and large scale operations and include storage, handling, mixing, and extruding. This paper deals with corrective measures and attempts to answer: What is available today? What is being used? How long does it last? What does it cost?

3:00 p.m. "Controlling and Reducing Monomer Content in PVC Formulations Through Advanced Compounding Techniques"
Ronald Adams, Chief Engineer
Hewlett & Packer Corporation

Abstract: Mr. Adams will discuss methods of reducing VCM content in both rigid and plasticized PVC formulations through advanced compounding techniques. An analysis of typical PVC formulations will be made defining all processing stages where monomer might be set free, including pre-blending, melt compounding, pelletizing, pellet drying, conveying, storage and remelting during final conversion. The possibility of eliminating VCM by thermal or auto-catalytic decomposition will be discussed.

3:30 p.m. Summary Highlights of the Conference
Dr. Daniel S. Dwyer
Keller and Heckman, Washington, D.C.

Extra Paper "Vinyl Chloride Analysis in PVC Processing Plants"
Paul A. Ketterer, Group Leader Analytical
Tenneco Chemicals, Inc.

Mr. Ketterer will be on the Panel Friday, 10:30 a.m.

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WHY YOU SHOULD ATTEND

The Department of Labor, Occupational Safety and Health Administration (OSHA), has proposed new standards to limit exposure to vinyl chloride monomer (VCM). This regulation is of concern to plants manufacturing VCM and/or polyvinyl chloride (PVC) and plants which process PVC into compounds and/or fabricated products. The regulation has been devised in order to limit exposure to VCM, as it has been suspected of being linked to the incidence of angiosarcoma. Other governmental agencies, such as the Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA) are also interested in this problem. The Society of Plastics Engineers, Inc. has scheduled a two day technical conference in order to disseminate information relative to the new regulation, emphasizing the effect on the PVC processor.

The RETEC will feature...

- History of the VCM situation relative to its effect on employee health.
- A summary of OSHA, FDA and EPA regulations, current and proposed.
- Explanation of what the regulations mean to producers, processors and users of vinyl plastic products.
- Analytical devices and methods of detection and monitoring.
- Protective equipment.
- Processing techniques to minimize VCM exposure.
- Analysis of future needs.
- Educational displays pertinent to the technical papers.

EDUCATIONAL DISPLAYS - Versalles Terrace

Hours: Thursday, Oct. 31 - 10:00 a.m. - 12:15 p.m.
2:00 p.m. - 6:00 p.m.
Friday, Nov. 1 - 10:00 a.m. - 12:15 p.m.
2:00 p.m. - 4:00 p.m.

Feature of the Educational Displays will consist of computerized analyzing equipment for the detection of VCM, protective equipment from VCM exposure, as well as consulting, engineering and analytical services relative to VCM. Detection equipment includes spot and continuous analyzers based on gas chromatography, infrared and colorimetric techniques. For further information, contact E. J. Wicks, Exxon Chemical Co., P.O. Box 538, Linden, N.J. 07036, (201) 476-2162.

WEDNESDAY EVENING - OCTOBER 30, 1974

8 - 9 p.m. REGISTRATION, Regency Foyer, 3rd Floor

THURSDAY, OCTOBER 31, 1974

7:00 a.m. Registration - Imperial Foyer, 2nd Floor MORNING SESSION - ESTABLISHING A PERSPECTIVE

8:45 a.m. Welcome and Introduction
Arvon B. Magram, *Helco Chemical Div., W.R. Grace & Co., President Palmdale Section, SPE*

9:00 a.m. Keynote Address: "What is the Vinyl Chloride Monomer (VCM) Problem?"
Richard Fleming, *Vice-President, Chemicals Group, Air Products & Chemicals, Inc.*

Abstract: Mr. Fleming will present an up-to-date overview of the VCM problem, particularly as it relates to the concerns of the processors and fabricators for worker protection. He will discuss various key issues leading to the development of the OSHA Standard now in effect and the polymer producers' responsibility to workers and customers.

9:30 a.m. "VCM and PVC Resin Manufacture"
Dr. Paul Lubo, *Group Director, Organics & Polymers Division, Tenneco Chemicals, Inc.*

Abstract: VCM and PVC resin manufacturing processes are reviewed and related to the degree of worker exposure in the past and present. Additionally, information on the VCM level in resins as shipped to processors will be discussed.

10:00 a.m. "VCM From Resin Shipment Through Fabrication"
Rodney P. Becker, *Manager, PVC Applications & Technical Service, Frederick A. Sacks, Applications Engineer, Hestite Division, Diamond Shamrock Chemical Co.*

Abstract: The results of VCM determination at compounding and fabricating operations in processors' plants will be detailed. Operations most likely to need close supervision will be described. Methods for minimizing worker exposure will be suggested. This paper should be informative especially for those wishing to upgrade their understanding of the complicated technology involved in the processing stage of articles based on PVC.

10:30 a.m. Coffee Break
Moderator: Dr. Lewis B. Weisfeld, *Vice-President and Scientific Director, Cincinnati Alkacron Chemicals, Inc.*

10:45 a.m. Continuation of: "VCM From Resin Shipment Through Fabrication"

11:15 a.m. "VCM - The OSHA Standard and Its Interpretation"
(Speaker to be announced)

OSHA will discuss the background leading to the standard in existence after October 5, 1974. What is the current standard? Who is affected and how? Ongoing and future activities by OSHA in this area will be included as much as possible.

12:15 p.m. LUNCHEON - Imperial Ballroom
Guest Speaker: John H. Myers, *President SPE General Manager, Research & Development, Delaware Plastics Division, Container Corp. of America*

THURSDAY, OCTOBER 31, 1974

AFTERNOON SESSION

2:00 p.m. "VCM - The EPA Viewpoint"
Glenn E. Schweitzer, *Director, Office of Toxic Substances, U.S. Environmental Protection Agency, Washington, D.C.*

Abstract: Mr. Schweitzer's presentation will cover recent EPA activities relative to VCM. It also should provide insight into what industry should now be doing or planning to do in order to control VCM as a pollutant.

2:30 p.m. "VCM - The FDA Viewpoint"
Gerard L. McCowin, *Assistant to the Director, Division of Food and Color Additives, Food and Drug Administration (FDA), Washington, D.C.*

Abstract: Current involvement by FDA will be covered, along with actions taken or pending. This will include a discussion of the Food Additives Regulations as they relate to vinyl chloride and what they require of the processor.

ANALYTICAL DEVICES & METHODS

Moderator: Dr. Gerald J. Mantel, *Director of Research, Air Products & Chemicals, Inc.*

2:00 p.m. "Determination of Vinyl Chloride in Workplace Air"
Dr. Robert H. Hill, Jr., *Chemist, Department of Health, Education & Welfare, Public Health Service, Physical & Chemical Analysis Branch, DILCD, National Institute for Occupational Safety & Health (NIOSH), Cincinnati, Ohio*

Abstract: The method used by NIOSH for determination of VCM in workplace air is discussed. Air from the worker's breathing zone is drawn through a tube containing activated charcoal and the vinyl chloride is trapped. For analysis, the vinyl chloride is desorbed from the charcoal with carbon disulfide and is subsequently determined by gas chromatography.

3:30 p.m. "Monitoring Methods for VCM at Western Electric"
Dr. Frank M. Zado & Dr. J.O. Rasmussen, *Western Electric Research Center*

Abstract: Vinyl chloride (VCM) monitoring in industrial atmospheres at Western Electric can be accomplished with an automated VCM analyzer. This instrument consists of a portable gas chromatograph equipped with a flame ionization detector and a control module providing capabilities for automated and unattended operation. The highly efficient GC continuously provides interference free measurement of VCM concentrations from less than 0.1 ppm in cycles of 4 minutes. Less frequent measurements, if desired, are simply dialed in.

4:00 p.m. "Analysis for VCM in PVC Resins, Compounds and Extractions"
For E. Simmons, *Manager, Central Analytical Dept., M & T Chemicals, Inc.*

Abstract: The gas chromatographic methods for the determination of VCM in PVC Resins, compounds and liquids which have been in contact with finished PVC articles are presented. The preparation of standards and samples are discussed in detail. The problems of sensitivity and interferences and alternative means of detection are presented especially in the area of liquid extractions.

4:30 p.m. - 6:00 p.m. Industry Reception - Cash Bar, Versalles Ballroom

Registration
Palmdale Section/Vinyl Plastics Division - REGIONAL TECHNICAL CONFERENCE - Society of Plastics Engineers, Inc.
"VCM - THE PROCESSOR'S PERSPECTIVE"
Thursday-Friday, October 31 - November 1, 1974 - AMERICANA HOTEL, 7th Ave. & 52nd St., N.Y.C.

Name	Title	Address
Company _____ Mail & Checks for Registration payable to: PHILIP G. WHITNEY, 105 South Orange Ave., 105 South Orange, N.J. 07066 (201) 852-1145 Payable in U.S. Currency		
Mail check & the card to PHILIP G. WHITNEY, 105 South Orange Ave., 105 South Orange, N.J. 07066 (201) 852-1145	Registration Fee: Advance \$60 At Conference 75	Please check: Member _____ Non Member _____
Committee Only Date Rec'd _____ Amount \$ _____	List names and member status for whom additional remittance is enclosed on separate sheets. Hotel accommodations may be arranged directly with AMERICANA HOTEL. Reservations must be made by October 15, 1974. Fees include Luncheon tickets and RETEC Participant Book.	

ADVANCE REGISTRATIONS OR REFUNDS WILL BE HONORED ONLY IF POSTMARKED BY OCTOBER 23, 1974

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