

6/9/92

Paul Zakriski

Says the carbon tube method was developed by Dow and ^{quickly} used by the rest of the industry. The measurements were good - almost as good as today. The method was validated by spiking the tubes to measure the % recovery in the tubes. Re-validation was done later in late 1970s or early 1980s by pumping a standard to verify pumping efficiency and retention of VCM over a long period of time. He recommends re-doing some of the 1973, 74, 75 ~~some~~ work with today's methodology to verify the earlier conclusions on exposure. He and Andy Fairlie were involved with test validation.

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Ahmed - Haller

Modeling of VCM Concentrations During Thermal Processing of PVC.
3/31/83

$$AVCM = \frac{(RVCM)(\text{weight of PVC in 8 hrs})(\text{fraction of VCM lost}) R T}{28.8 (\text{number of air turnovers/hr})(\text{air volume in building})}$$

(AVCM) - measured and a distribution calculated.

(RVCM) - a distribution is calculated based on the distribution in 1982 and mean RVCM values for 1974, 1975, and 1976.

(fraction of VCM lost) - found to average 60%.

(weight of PVC in 8 hours) & (air volume in building) go together; larger weights require larger buildings.

VCM is assumed to be evenly distributed in the building.

(number of air turnovers/hr) - calc. based on probabilities of AVCM and RVCM at 10. Assumed to be 5.

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FIG. 3.1: SUSPENSION MEASUREMENTS RYCH DATA (1974, 75, 76 and 82)

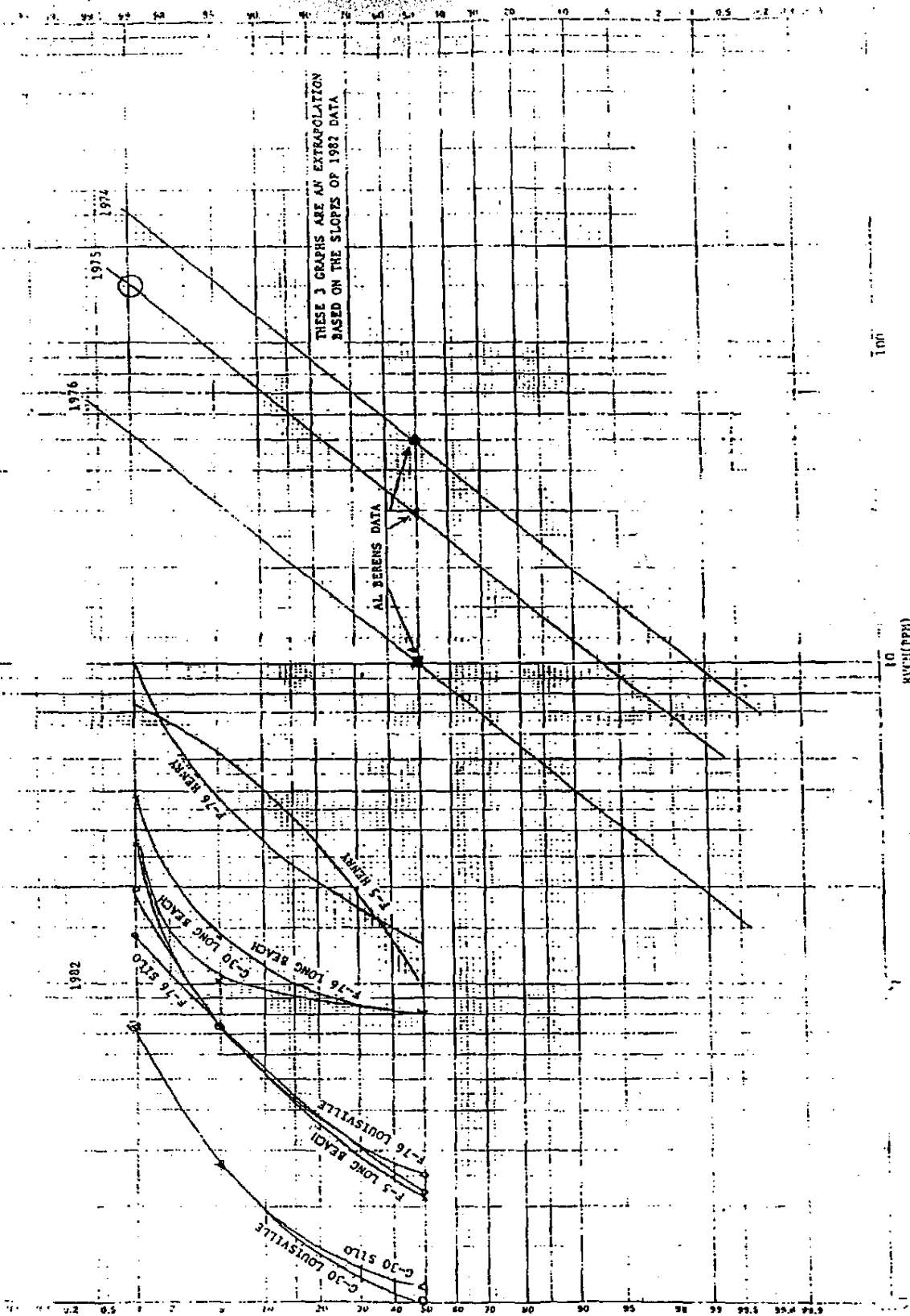
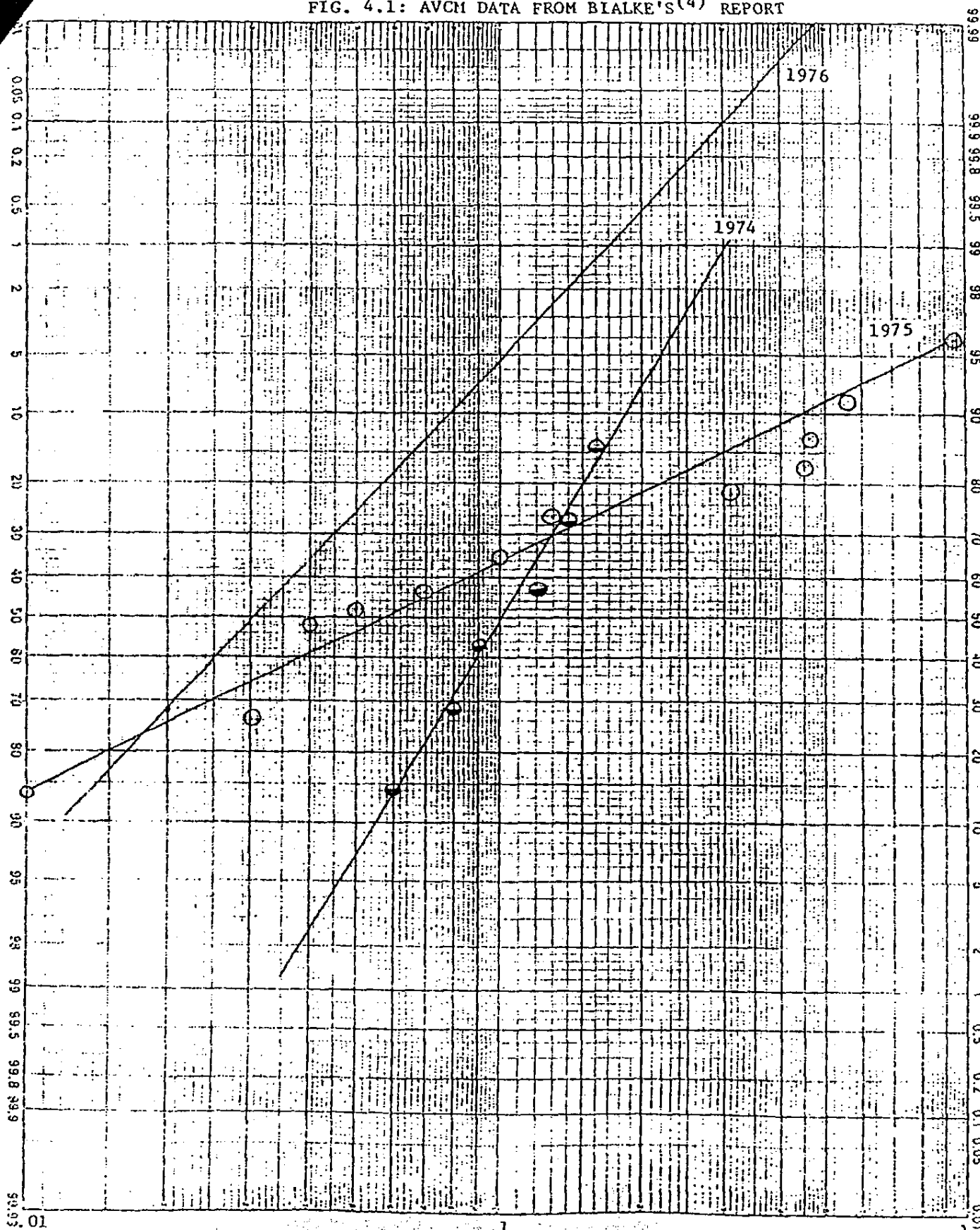


FIG. 4.1: AVCM DATA FROM BIALKE'S(4) REPORT



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APPENDIX 4 (CONT'D)

(II) Calculation of Effective Air Turn-over Rates

From Fig. 4.1 and Table 3.1 (Appendix 3) the following AVCM and corresponding resin RVCM data can be tabulated.

1974 Data

<u>Percentile</u>	<u>RVCM</u> (PPM)	<u>AVCM</u> (PPM)	Effective Air Turn-over Rate/Hr. Calc. From Equ ⁿ (8)
99	260	.1 .3	55
95	150	.3 .22	144
50	52	.22 .1	114

1975 Data

99	150	2.5	10*
95	95	.8	20
50	30	.06	88

1976 Data

95	33	.1	55
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Based on this data the least value of effective air turn-over rate is 10/Hr.