

INTER-OFFICE MEMO **TENNECO CHEMICALS, INC.**

TO	W. Miringoff	AT	Burlington	DATE	October 30, 1975
FROM	R. F. Fanter	AT	Flemington	COPY TO	W. R. Fogelsanger D. M. Hershkowitz J. T. Sweeney P. L. Wilson
SUBJECT	Flemington Process Engineering Report October, 1975				

The major areas of work this month were plant trials using a dual catalyst system, a detailed tabulation of reactor hours, and the conducting of a VCM survey throughout the plant.

Dual Catalyst LOP #1015

The overall goal of this project is to equalize the cooling demand during the course of the reactions. Based on discussions with Lucidol and trials run at Burlington, it was decided the best system to try would be a Lauroyl Peroxide/Di-2 Ethylhexyl Peroxydicarbonate (EHP) mixture. This is based on two main factors: the EHP is a liquid that has been previously used in the plant so its use presents no problems to manufacturing and with a half life of 35 min. @ 158°F, it is essentially used up by the time the reaction has progressed to the normal heat surge point (5 hrs. @ 158°F).

Trials to date have shown that it is not necessary to reduce the Lauroyl Peroxide level when the EHP is added. Also no effect on particle size or other resin properties has been noted. Use of this dual catalyst system should reduce the batch polymerization time by 1/2 to 1 hour.

VCM Sampling Program

A program of sampling the vapor and liquid discharge streams throughout the plant and analyzing them for VCM content was undertaken by Process Engineering during the month. Vapor samples were taken from the vent condenser discharge, dryer exhaust blower, compressor seal coppus blower, slurry tanks and the reactors and strippers. Liquid samples were taken from the barometric sump, vapor containment tank, chip baskets, foam knock out tanks and the dryer centrifuge water. A report summarizing the results of this sampling program will be issued shortly.

Reactor Downtime

A detailed accounting of all reactor downtime is now being kept by Process Engineering. This is being done to determine the exact cause and extent of all reactor downtime. By determining the frequency and duration of each upset to the normal process scheme, we hope to be able to decide how best to maximize productivity out of the reactor area.

Process Optimization

In an effort to bring the plant up to full capacity, a study is underway to find all the possible means of modifying the process to shorten the overall cycle time. The areas being investigated in an effort to shorten the now polymerization time are:

- 1) Shortening evacuation times
- 2) Reducing the cleaning frequency
- 3) Reducing the air out time

Water Treatment

The basic process for treating the plant cooling and chilled water systems has been established. No chromates will be used in the system to eliminate any possible conflict with the municipal sewer authorities. Corrosion control for the cooling water and chilled water systems has been specified along with biological control for the cooling tower. The only open question is the need for biological control in the chilled water system. A meeting with Betz has been set for October 30th to resolve this question.

Other

- 1) A quick survey was done to establish the possibility of installing a filter on the discharge of the transfer blower. It was found to be possible and the plant is progressing with the purchase and installation of them.
- 2) The feasibility of replacing the fine tube coolers on the transfer blower with jacket pipe was checked out and found to be possible. The units has been installed on the "A" transfer system.



R. F. Fanter

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