

PVC RESEARCH AND PLANT MEETING

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STEAM STRIPPING

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STEAM STRIPPING

Residual VCM in PVC

A program is presently underway in the Oklahoma City Pilot Plant to evaluate the steam stripping of VCM from PVC slurry. The program is an extension of previous steam stripping studies, with the objective of optimizing or modifying our present steam stripping procedures to provide lower residual VCM in slurry, without accompanying adverse effects on resin properties. The following major variables are being studied in this phase of the program:

1. Steam injection method
2. Agitator speed
3. Steam flow rate
4. Stripping temperature and time
5. Boiling rate
6. Additives

This phase of the program will only involve 5385 resin. All runs will be steam stripped in the reactor to duplicate plant conditions.

Vibration

The Aberdeen PVC plant experiences severe vibration problems during steam stripping. A team of personnel from Central Engineering, Process Engineering, Research and Development, and the Aberdeen plant has been formed to evaluate the problem and seek solutions. Southwest Research Institute is also being involved in this study. Possible solutions suggested by the team to date are:

1. Inert gas (nitrogen) addition to steam
2. Use of desuperheated steam
3. Dual steam injection
4. Reduced steam flow rate
5. Reverse agitation

6. Steam injection at higher point in reactor

7. Use of special injection nozzle

Plans are to test the dual steam injection method in Aberdeen during December. Nitrogen addition to steam was tested recently in the Oklahoma City Pilot Plant, with no noticeable effect. Vibration will be monitored, through the aid of a seismic sensor, during the pilot plant steam stripping program to check the effects of the variables studied on vibration. These variables include steam flow rate and special nozzles, as suggested by the vibration team.