



UNION CARBIDE CORPORATION

CHEMICALS AND PLASTICS

P. O. BOX 471, TEXAS CITY, TEXAS 77590

September 28, 1967

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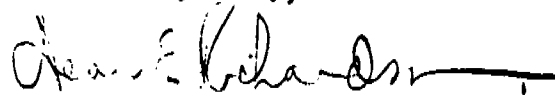
Mr. Warren Cook
Institute of Industrial Health
University of Michigan Medical Center
Ann Arbor, Michigan 48104

Dear Mr. Cook:

Further to our conversation, I am enclosing a simplified flow diagram and process description of our solvent (solution) process for making VCl/VAc copolymers. No PVC is made by this process, although one maleic acid modified VCl/VAc resin is occasionally produced.

Under separate cover, I am forwarding the suspension vinyl recipe information to Dr. Magnuson. If I can be of further service, please let me know.

Yours very truly,


Dean E. Richardson

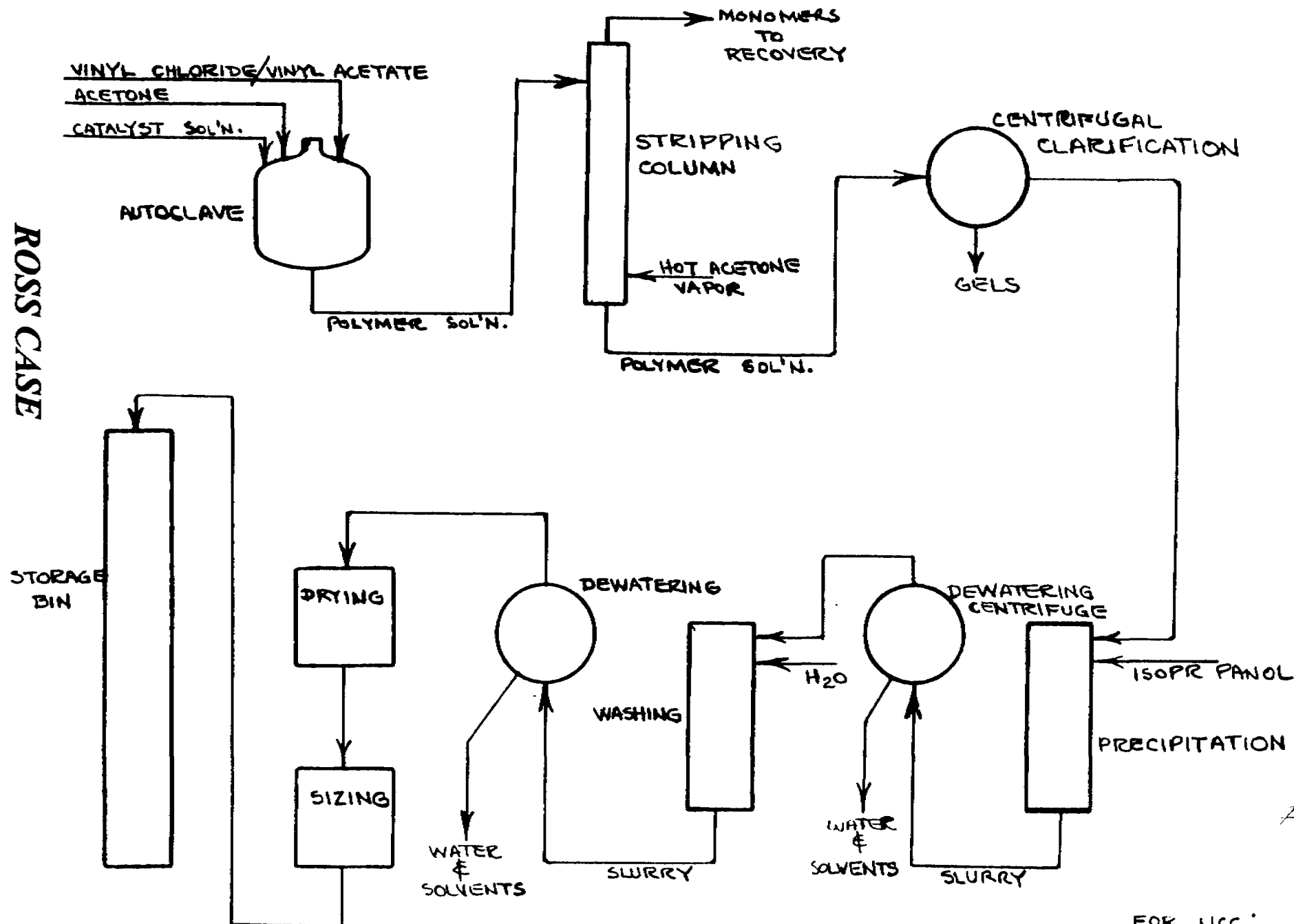
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Enclosure

cc: Dr. F. E. Bailey, Jr.
Mr. J. H. Barrett
Mr. O. T. Carlisle
Mr. Don Deese
Dr. Bert Dinman
Mr. J. F. Erdmann
Mr. J. H. Field
Dr. R. E. Joyner
Dr. Harold J. Magnuson
Mr. R. N. Wheeler

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SOLVENT PROCESS VINYL POLYMERIZATION
SIMPLIFIED SCHEMATIC FLOW DIAGRAMROSS CASE
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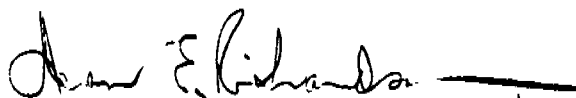
PROCESS NOTES

SOLVENT (SOLUTION) VINYL PROCESS:

The polymerization is carried out in acetone in jacketed, agitated lead-lined autoclaves. Acetone, monomers and catalyst solution (isopropyl peroxydicarbonate) are fed to the autoclaves continuously. The resin solution, a thick, clear, syrupy liquid, is withdrawn continuously and fed to a stripping column where unreacted monomers are stripped out by a countercurrent flow of hot acetone vapor. The resulting solution of polymer in acetone is centrifuged (clarified) to remove gels and foreign particles.

In the processing unit, the resin is precipitated from the solution by adding isopropanol, after which the resin is dewatered in a continuous centrifuge. The dewatered resin is reslurried in water to remove residual solvents, after which the dewatering is repeated. The wet resin is dried in flash dryers, any oversized particles are removed and the finished resin is conveyed to a bin for storage. Like PVC, it is in the form of fine, white powder.

FOR UNION CARBIDE CORPORATION:


Dean E. Richardson

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