



INTERNAL CORRESPONDENCE

UC 149-2

CHEMICALS AND PLASTICS

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

TO (NAME) Dr. W. R. Manning
COMPANY Bldg. 2000-3328
LOCATION TECHNICAL CENTER

DATE April 1, 1970

RECEIVED

APR 3 1970

R. N. Wheeler

COPY TO Mr. C. E. Bowman
Mr. F. G. Clark - 501
Mr. M. E. Eisenhower
Dr. C. W. McGary - 511
Mr. L. G. Peyton
Dr. A. B. Steele - 501 •
~~Mr. R. N. Wheeler - 514~~

SUBJECT

Dear Ray:

I am attaching a copy of my translation of Wacker's letter of March 23, 1970, answering some of the questions I asked at your suggestion. You will note that they plan to forward flow diagrams and other details in a few days, and I'll pass these along when they arrive.

When you have digested the information, you'll probably have further questions about some aspects. If you'll send your questions to me, I'll combine them with my own and those of other interested personnel and forward them to Wacker.

Yours very truly,

Dean E. Richardson

DER/sj

Attachment

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TRANSLATION

WACKER-CHEMIE GMBH
Burghausen Works

March 23, 1970

Union Carbide Corporation
Chemicals and Plastics
P. O. Box 471
Texas City, Texas 77590

ATTENTION: Dean E. Richardson

Subject: Monomer Recovery

Dear Mr. Richardson:

Referring to your letter of February 10, 1970, the technical details and flow diagram of our monomer recovery process will be sent you in a few days by our technical group. Your other questions are answered below, (answers numbered to correspond to your questions):

- 3) To condense monomer distilled from the autoclaves, we use two coolers in series (up to 3 connected one after another at any time). For the time being, the first coolers are operated with normal cooling water having a temperature of about 24°C. The other coolers are operated with cooling water at 15°C maximum temperature.
- 4) As you know, our monomer is distilled for reuse. Before the distillation, the vinyl chloride is washed with alkaline water of pH 8.0.
- 5) We do not recover vinyl acetate. We are endeavoring to develop a suitable method.
- 6) Several times we have had small explosions in the vinyl chloride piping, near the monomer compressor, in which a piece of the VA pipe was split out. We suspect that vinyl chloride polyperoxide caused these explosions, but we were unable to detect any such materials. To avoid any buildup of peroxides, we do not at the moment use the compressors to carry the distillation beyond standard pressure (atmospheric?) to avoid drawing oxygen in. Moreover an inhibitor is added immediately after the compressor. Other precautions are in effect at this time. (See Question 8).
- 7) We haven't tried it, but it is our opinion that washing the monomer piping with caustic would be effective in destroying polyperoxides.
- 8) As a further precaution against peroxide formation, we have recently piped nitrogen to the stuffing boxes of our compressors. Moreover, the oxygen concentration in the piping after the compressor is automatically recorded. Our technical section will share details of the method if you desire.

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TRANSLATION (Continued)

- 9) Our monomer consumption for a year's time is established from the change in VCl inventory and the PVC produced. In 1969, this amounted to about 106 kg. monomer/100 kg. PVC of all sorts. For suspension PVC, this value lay between 104-105 kb./100 kg. PVC.
- 10) We blend suspension PVC exclusively. For this purpose, we have blending bins of 70 cubic meters capacity, to contain four charges of resin from the 25 cubic meter autoclaves.
- 11) Rotary valves are used at various places in our PVC finishing systems. Details will be shared with you by our technical section.
- 12) Our capacity in 1969 amounted to 12.4 kg./cubic meter/hr. This figure includes the effect of product mix, repairs and other autoclave downtime (for example, periods of temporary monomer shortage). By comparison, we obtain in our 25 cubic meter autoclaves with our Vinnol VH65D recipe (corresponding to Vinnol VH70D) in the latest month a capacity of about 15 kg./cu. meter/hour.
- 13) We have in use at this time autoclaves of 12-, 14-, 24- and 25-cubic meters volume.
- 14) Our PVC production is autoclave limited.

We hope that our answers are useful to you, and continue our best wishes to you and your colleagues.

With friendly greetings, 

WACKER-CHEMIE GMBH
Burghausen Works
Group J

/s/ Bauer /s/ Balwe'

Translated by D. E. Richardson
3-31-70
Typed by S. Jones
4-1-70

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