

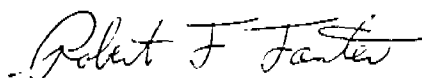
OFFICE MEMO TENNECO CHEMICALS, INC.

TO	G. I. Rozand	AT	Piscataway	DATE	August 17, 1977
BY	R. Fanter	AT	Piscataway	COPY TO	D. C. Coldiron
	<u>Copolymer Continuous Stripper</u>				R. Donovan
					W. Gabel
					R. E. Harmond
					M. R. Haymon
					J. K. Jacob
					F. X. Ritter
					J. T. Sweeney
					M. Wagshul

As per your request, attached is a preliminary flow diagram and estimate for a continuous copolymer stripper at Flemington. The unit is designed to strip 100 MM lb/yr of copolymer slurry to 50 ppm VCM. The estimated cost of the unit, installed, is \$1.2 million.

This design and estimate are based on very little data and a lot of assumptions. Attached is a list of the assumptions and data that need to be verified.

The stripping column itself is an exact duplicate of the ones being purchased for the Pasadena Plant. Those are for homopolymer use but should work for copolymer. Please note on the attached estimate that the cost of the column represents 50% of the total estimate. Therefore, no significant change can be made in the overall cost of the project unless the column cost is changed. The estimated cost of the column is the purchased price for one of the Pasadena columns and thus is a good estimate.


Robert F. Fanter

RFF:db

COPOLYMER CONTINUOUS STRIPPER

OPERATING PROCEDURE

Proposed operation of the unit would be as follows.

1. A batch is transferred out of a reactor into a stripper as normal.
2. The batch is recovered, or stripped down, to 15" Hg without the adding of steam; as normal.
3. The batch is transferred out of the stripper into the new surge tank.
4. The batch is heated from 140 to 160°F in the surge tank.
5. Slurry is continually fed from the surge tank into the top of the stripping column at 72 gpm. It is heated up to 175°F by an inline steam injector.
6. The slurry falls down the column thru 36 dual flow trays while steam flows countercurrently up thru the trays. Each tray has 5.7 inches of slurry on it. It takes 20.2 minutes for the slurry to flow down the column.
7. The stripped slurry (50 ppm) flows out the bottom of the column through a flash pot into a transfer pump.
8. In the flash pot, the slurry is exposed to a vacuum created by a steam jet. This causes the slurry to flash off water and be cooled to 150°F, preventing any further heat degradation.
9. The stripped, cooled, slurry is pumped into the existing blend tanks.

COPOLYMER CONTINUOUS STRIPPER

ASSUMPTIONS AND DATA

1. A copolymer batch recovered to 15" Hg at 140°F will contain 10,000 ppm VCM and 30,000 ppm VAM. A single sample gave these results. This should be verified by plant trials.
2. Copolymer slurry can be stripped at 212°F without color or rheology degradation. This should be verified by plant trials.
3. Copolymer slurry at 212°F and minimum agitation will not agglomerate. This could be checked out in the laboratory.
4. Copolymer slurry at 10,000 ppm VCM can be stripped at 175°F.
5. The Flemington plant has the 5,200 lbs/hr of steam the unit will require.
6. The "Chip basket" problem can be resolved.
7. The local planning board at Flemington will allow installation of a 100' tall column.
8. The large steam rates used in the laboratory tests are not required. The preliminary design calls for 1/10 the steam rate used in the laboratory.



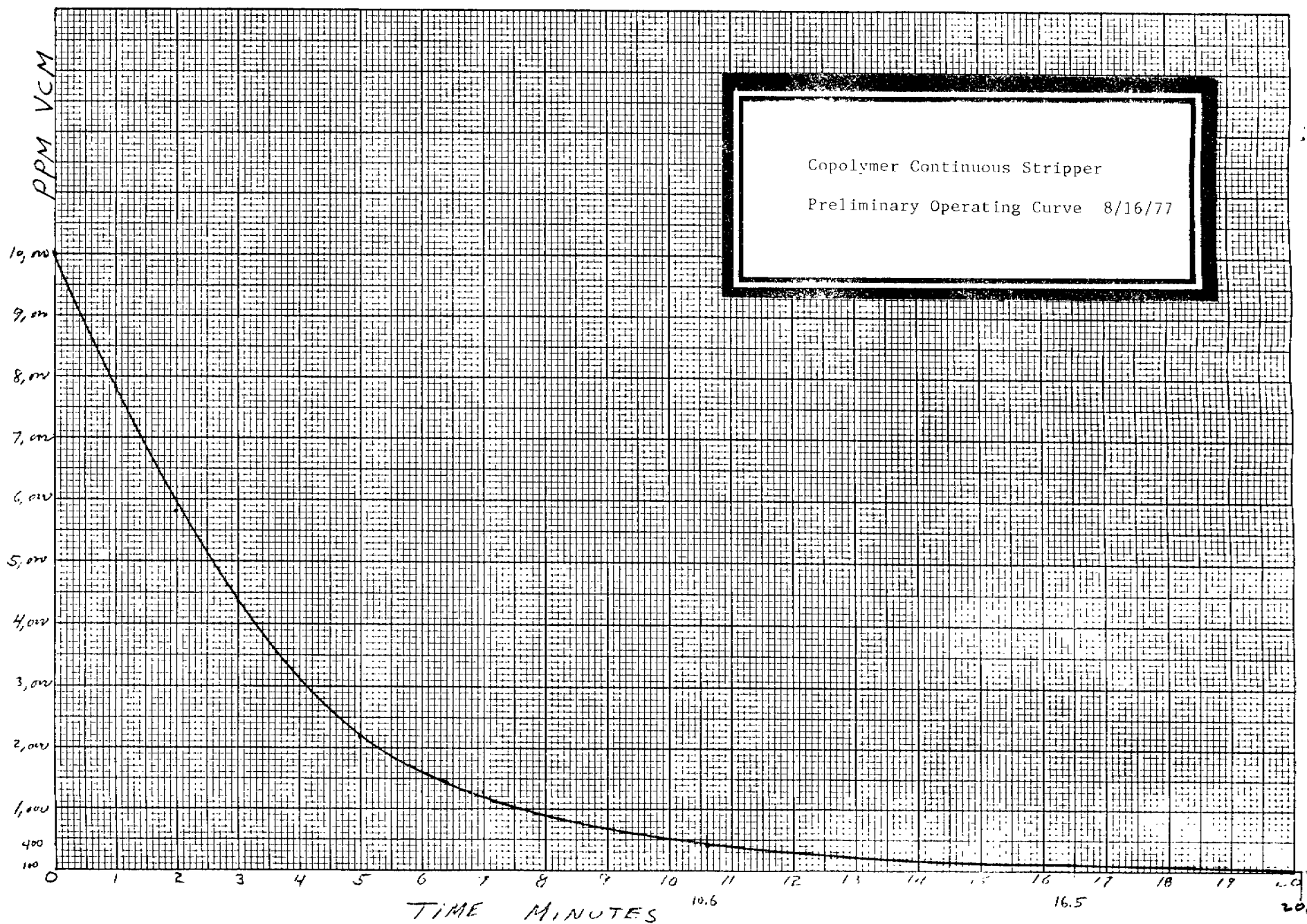
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ESR NO _____
EST NO _____
DATE 8/17/77

APPROVALS

PREPARED BY <u>W. Wermuth</u>	PROJECT MGR. _____
COST ENGINEER _____	DIR. OF PROJECTS _____
MGR. OF GEN. ENGR. _____	DIR. OF ENGINEERING _____

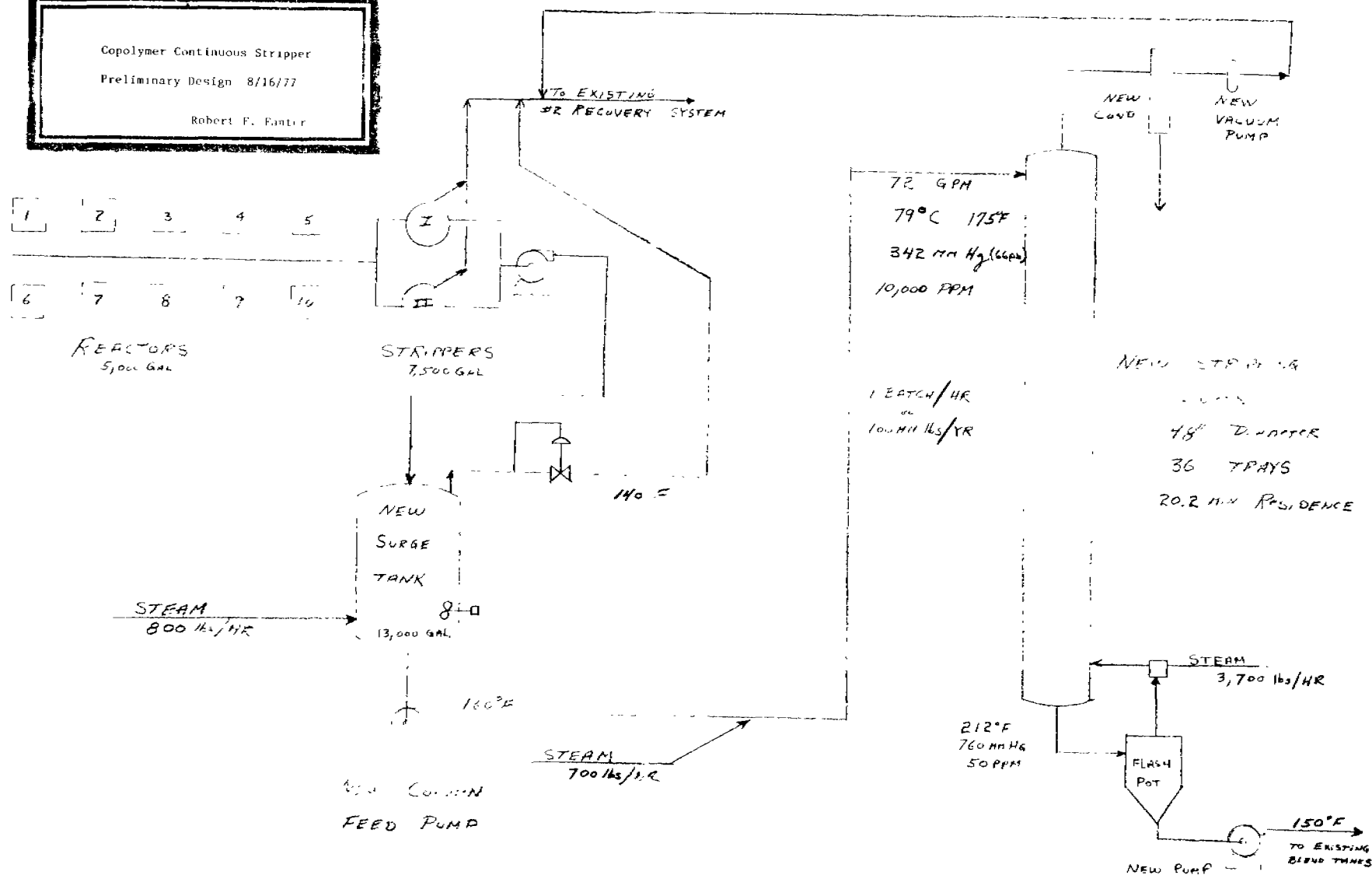
COLORITE 007083



Copolymer Continuous Stripper

Preliminary Design 8/16/77

Robert F. Fauter



COLORITE 007084