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NORCHEM ANCAT® LASER OPERATED POLYMER SYSTEM

- New Approach to Automatic Polymer Solution Control ▪
- Detects the Slightest Shift in Polymer Solution Concentration ▪
 - Eliminates Polymer Related Upsets ▪
 - Laser Accuracy/Semiconductor Reliability ▪
- Controls Polymer Solution Concentration to $\pm 0.1\%$ ▪



ENHANCED ▪ POLYMER ▪ IMAGING ▪ CONTROLLER

ADVANCED POLYMER IMAGING

The NORCHEM EPIC™ applies a combination of scatter and absorption principles to establish a spatial distribution of polymer composites which accurately correspond to the relative solution concentration. The unique application of selective wavelength imaging allows precise measurement and control of the processed polymer product **to within one tenth of one percent** accuracy.

NORCHEM EPIC™

The NORCHEM EPIC™ marks a new era in automatic polymer processing and control. The EPIC™ combines proven AnCAT® processing technology with the new NORCHEM laser operated Enhanced Polymer Imaging Control system. The EPIC™ polymer system ensures exact polymer solution concentration regardless of neat polymer variations or fluctuations in dilution water flowrate.

A remarkable advancement over flowmeters, calibration columns and other mechanical measuring devices, the EPIC™ reads the composition of the aqueous polymer product directly eliminating inconsistencies caused by compound instrument errors. Unlike mass flow and volumetric flow measurements which establish a ratio between the concentrated liquid polymer and the dilution water flowrates, the EPIC™ directly determines and delivers the exact polymer solution concentration, avoiding polymer related upsets created by inaccurate polymer preparation.

POWERFUL SOFTWARE

The NORCHEM EPIC™ combines AnCAT® processing technology with an industry tested and approved software package. The integrated software coordinates polymer processing with laser imaging to create a precise, easy to use, **one button approach** to automatic polymer solution concentration control.

REAL TIME MONITORING

The EPIC™ polymer system uses a true on-line sensor which continuously scans the polymer dispersion optoelectronically. The photo-optic sensor measures and compares the polymer concentration with a preset value, **in real time**, while the polymer system is in operation.

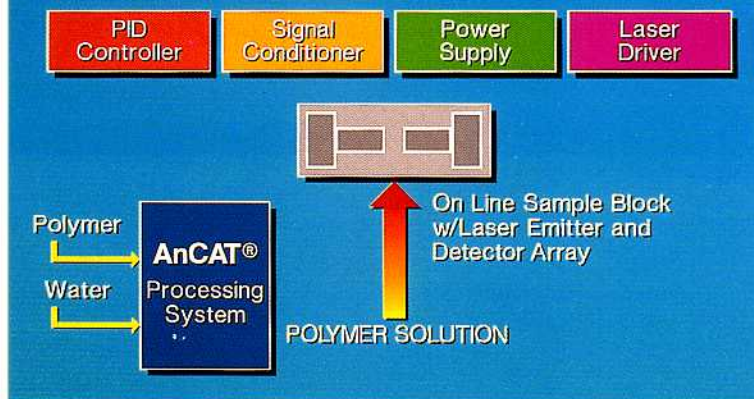
SEMICONDUCTOR LASER TECHNOLOGY

The NORCHEM EPIC™ incorporates advanced single frequency laser diodes with operating life expectancy in excess of 50,000 hours. Internal stabilized power circuits produce a self-compensating, ultra-stable imaging laser which accurately maintains set point values over a range of 0.2 to 3.0% concentration.

SPECIFICATIONS:

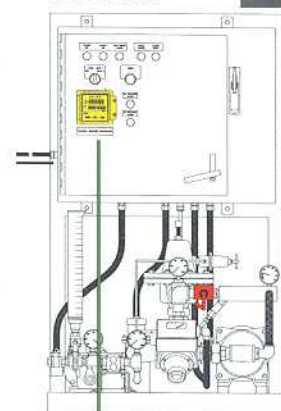
- ***SYSTEM CAPACITIES:**
Neat Polymer Flowrate: 100, 300, 576, 864, 1728, 2880, 5760 GPD
Polymer Solution Flowrate: 4, 8, 20, 30, 60, 100, 200 GPM

AUTOMATIC SOLUTION CONTROLLER



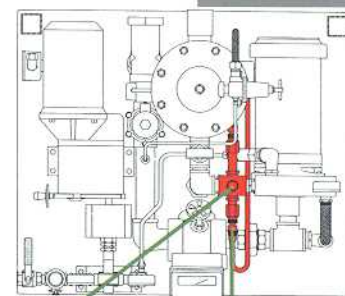
EPIC SERIES II POLYMER SYSTEM

- POLYMER SOLUTION CONCENTRATION RANGE:
Maximum final concentration: 3.0%
Minimum final concentration: 0.2%
- ACCURACY: $\pm 0.1\%$
- OPTICAL:
Laser Type/Output: Visible Semi-conductor/Power 4.0mW
Laser Class: III a
Laser Operation: Continuous Wave
MTBF: > 50,000 Hrs.
- OPERATING TEMPERATURE: 0°C to +50°C
- ALARMS: Standard and optional alarm configurations available
- ****INPUT VOLTAGE:**
460/3/60 VAC $\pm 10\%$
120/1/60 VAC $\pm 10\%$
- POWER FREQUENCY: 50/60 Hz



Concentration Controller

PLAN VIEW



Laser Viewport Emitter/ Detector Array

*Request Bulletin Gen 90

**Input voltage dependent on model. Other voltage configurations available. Consult NORCHEM.



For more information please call

NORCHEM INDUSTRIES
1-800-371-EPIC