



THE SUPERIOR CONTROLLER

VOLUME 4 ISSUE 1

High Quality Chemical Facility Automated in North Carolina

When Intel, IBM, and Advanced MicroDevices select a polishing compound for their silicon wafers, they want only the highest quality grade available. That is why, when a major chemical company and supplier to the semiconductor industry built a new manufacturing plant in North Carolina they chose to automate it entirely. They wanted a consistent high quality product with zero defects.

In the fast paced, changing world of the semiconductor manufacturing industry, the only constants are the rigorously stringent quality control practices required throughout the manufacturing process. Automation is the only way to ensure a consistently high-quality product. These include purchasing only the highest quality and consistent polishing compounds for silicon wafers, disk memory, and other components.

The primary control systems had to control and monitor various chemical batching, blending, distillation and web coating processes located throughout the new facility. Approximately 200 valves, pumps, mixers, drives and other field devices were automatically controlled while more than 300 temperature, ph, flow, and other sensors were monitored. The control system included several Allen-Bradley PLC 5/40-E and SLC 5/04 controllers mounted in five stainless steel enclosures communicating with several PanelViews and PC-based operator interfaces strategically located for ease of operator access.

(Continued on Page 2)

Superior Controls was hired to design an automated control and monitoring system and integrate it with automated equipment purchased throughout the world.



The Superior Controller is published by Superior Controls, Inc. of Plaistow, NH—the leading controls system integrator specializing in the design and implementation of industrial automation and information systems.

The purpose of this newsletter is to present project examples to our customers. Your comments are welcome. Write or Fax:

Superior Controls, Inc.

P.O. Box 977 ■ Plaistow, NH 03865
(603) 382-2000 ■ Fax (603) 382-0122

e-mail: eng@superiorcontrols.com

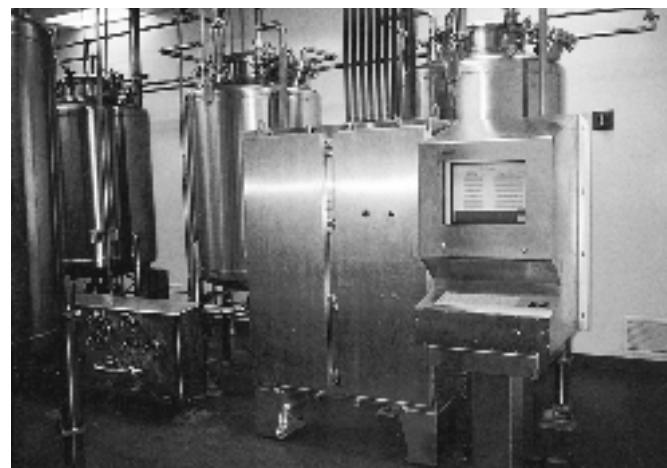
www.superiorcontrols.com

© 1998 Superior Controls, Inc. The Superior Controller & S logo are trademarks of Superior Controls.

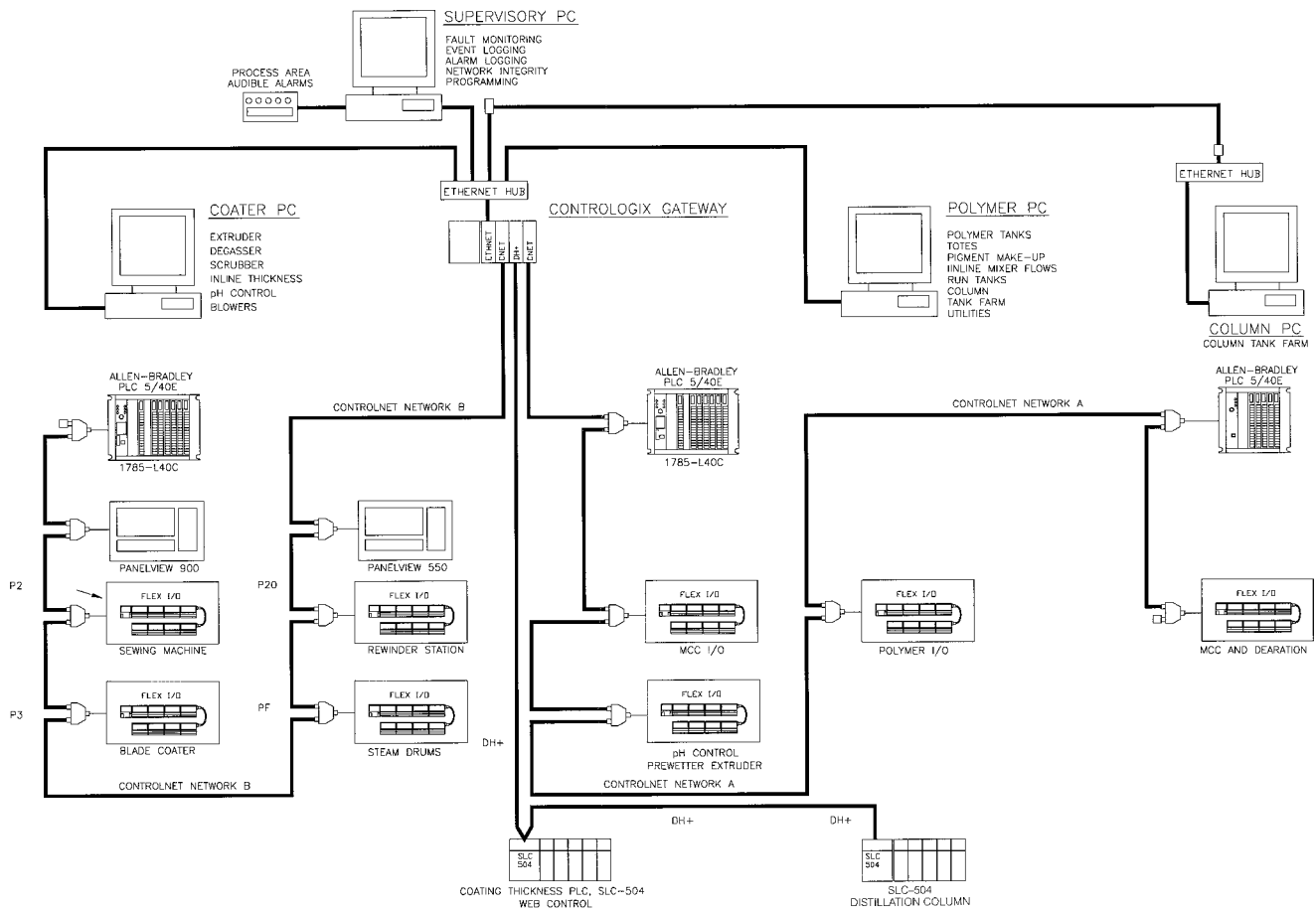
Pharmaceutical Facility Automated by Superior Controls

Superior Controls has successfully completed the automation of a major New England-based pharmaceutical facility. Like most pharmaceutical automation projects, this required automatic batching, blending, Clean in Place (CIP) data collection and trending and enormous amounts of validation documentation and quality assurance testing.

Eight operator interfaces (see photo) were configured using Intellution's FIX package along with two Allen Bradley PLC panels.



One of eight PC-based operator interfaces used for the control and monitoring of the pharmaceutical facility



The network layout for the control hardware of a new chemical facility

*High Quality Chemical Facility
(Continued from Page 1)*

Superior Controls also provided an Allen-Bradley ControlLogix Gateway to tie together the ControlNet, Ethernet, and Data Highway Plus networks. All critical alarms were then channeled through these networks to the supervisory PC which announced specific alarms through a plant-wide PA system.

So, how did Superior Controls ensure that a project of this complexity and magnitude be implemented correctly? They borrowed a documentation and validation process from the pharmaceutical industry. This included an extensive and enormously thorough Detailed Design Specification, (DDS), Factory Acceptance Test, (FAT), and Site Acceptance Test (SAT) that were prepared for customer review and approval. These validation documents, commonly written for the pharmaceutical industry by Superior Controls, ensure that the final automated product that this new chemical facility produces is precisely what was intended.

Superior Controls was responsible for the fabrication of the five panels, the provision and configuration of the Allen-Bradley PLC and PanelView equipment and the design and configuration of the several WNT-based PC-SCADA nodes. This fast track project was successfully completed and tested in four months.

Superior Controls, the leading control and automation Systems Integrator in the New England area, is expanding in response to customer demand.

AUTOMATION ENGINEERING OPPORTUNITY

- If you are a Chemical, Electrical, or Software Engineer experienced with PLC's, SCADA software, Visual Basic, and DCS systems;
- If you are familiar with automation requirements for the Pharmaceutical Chemical and Machine Control industry;
- If you enjoy the challenge and excitement of being part of a fast paced, highly skilled engineering team and you thrive on complete project responsibility

Then send your resume to Attn: Heather Kissel



Superior Controls, Inc.

73 Newton Road, Plaistow, New Hampshire 03865
 TEL: (603) 382-2000; FAX: (603) 382-0122
 e-mail: eng@superiorcontrols.com

THE PEOPLE WHO ARE SUPERIOR CONTROLS

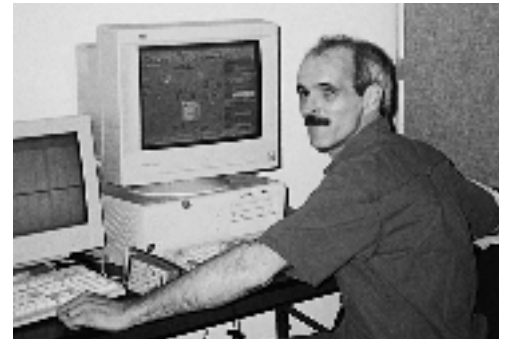
Superior Controls welcomes five new professionals



Mike Fedenyszen

Mike Fedenyszen is a talented electrical engineer with more than 20 years of experience designing and implementing control systems for the oil and gas industry as well as one of the largest builders of automated amusement rides. Mike is also a Massachusetts licensed construction supervisor.

Mike's extracurricular activities include Chairman of the Editorial Advisory Board to Motion Control and Intech magazines, and past district Vice President of The Instrumentation Society of Americas (ISA).



Jim McNally

Jim McNally is a seasoned professional with more than 20 years of experience in the motion control industry. Jim served a four-year stint as President of a Portsmouth, NH, based systems integrator that specialized in machine design and control. Previously, he spent several years as Electrical Engineering Manager of a packaging company. With his broad experience in drives, steppers, servos, and PLCs, Jim will provide technical leadership for the increasing number of motion control projects at Superior Controls.



Muriel Gordon

You may have noticed a new, friendly, professional greeting when you called the office recently—that's **Muriel Gordon**. As the receptionist, she ensures that your calls and messages get through promptly and cheerfully. Muriel joins Superior Controls after many years with a local power supply manufacturer.



Mark Noseworthy

Mark Noseworthy is another talented electrical engineer with more than seven years industrial controls experience. Mark's background includes electrical and mechanical design of PLC systems as well as customer service for a local manufacturer. Mark also has design experience in the food and beverage industry.



Anand Palkhiwala

Anand Palkhiwala has spent this past year designing and implementing an automated control and data acquisition system for a Mobil technology funded R & D project. The project—"The Removal of Polar Compounds from a Light Aromatic Feedstream using Zeolites" was part of his thesis requirements for his MS degree in Chemical Engineering from the University of Pennsylvania.

Superior Controls Expands

Superior Controls, the leading independent, high quality, Industrial Control Systems Integrator throughout New England is expanding.

With an engineering team of more than 25 professionals supported by more than 50 electricians and technicians at

Beckwood Services—our affiliate and local panel fabrication partner—the Superior Controls team is growing to meet our customers' automation and information technology needs.

You can visit us at www.superiorcontrols.com.



Superior Controls Engineering Team with Panel Fabrication Support Team