

GOOCH MUSCO ENGINEERING GROUP

TOTAL SYSTEM SOLUTION

Provided Through Collaboration Between:

GOOCH ENGINEERING ASSOCIATES

*Consulting Engineers
to the Polymer Processing Industry*

MUSCO ENGINEERING ASSOCIATES

*Electrical Engineers
Facility Engineering & System Integration*

BENEFITS OF THIS COLLABORATION TO OUR CUSTOMERS:

The collaboration between our organizations provides potential customers with an integrated package of services, which can be tailored to meet specific project needs. Most capacity modifications, improvements, upgrades and expansions require a mix of engineering, manufacturing, project management and installation skills. We offer a single source for the services required to support your project. Gooch Engineering and Musco Engineering will provide the planning, scheduling and follow-up required to deliver a finished project on time and within budget.

COMBINED CAPABILITIES:

- ♦ Computer aided project scheduling systems
- ♦ Electrical distribution and building systems
- ♦ Engineering design and drawing production on state of the art CAD systems
- ♦ In-plant customer service and equipment maintenance
- ♦ Industrial ventilation and plant utility system design
- ♦ Operational procedures and system integration
- ♦ Project and construction management

PRELIMINARY PROJECT DEFINITION:

- ♦ Calender/Mixer line analysis and specification
- ♦ Compounding line analysis and specifications
- ♦ Development of project scope and cost estimates
- ♦ Studies
- ♦ Surveys
- ♦ Building code investigation

PROJECT MANAGEMENT:

- ♦ Project scope and coordination
- ♦ Expediting
- ♦ Procurement
- ♦ Scheduling

MACHINERY REPAIR:

- ♦ Bearing renewal
- ♦ Fabrication of replacement components
- ♦ Re-building – calenders, mixers, extruders and mills

EMERGENCY ASSISTANCE:

- ♦ Analysis of thermal problems
- ♦ Correction of lubrication and hydraulic problems
- ♦ On-site inspection
- ♦ Process evaluation
- ♦ Sourcing used components for emergency replacement

INSTALLED AND READY-TO-OPERATE FACILITIES:

- ♦ Construction management
- ♦ Pre-commissioning planning and execution
- ♦ Supervision of commissioning
- ♦ Process tuning

PROCESS DESIGN:

- ♦ Pricing and instrumentation diagrams
- ♦ Process flow diagrams

TECHNICAL ASSISTANCE:

- ♦ Process assistance
- ♦ Compounding and mixing process audits
- ♦ Electrical control and drive systems analysis
- ♦ Electrical load analysis
- ♦ Machinery run-in supervision
- ♦ Mechanical troubleshooting
- ♦ Energy Conservation Analysis

INSTALLATION DESIGN:

- ♦ Bid specifications for installation
- ♦ Electrical installation design
- ♦ Equipment specifications for procurement
- ♦ Foundation design
- ♦ Piping and industrial ventilation system design
- ♦ Plant design – equipment arrangement drawings
- ♦ Utility and electrical load analysis and diagrams

RE-MANUFACTURED MACHINERY:

- ♦ Re-engineering existing machinery for: new applications, improved precision, increased capacity, to suit new or changed process requirements
- ♦ Sourcing of necessary machine shop, fabrication, disassembly, and assembly services
- ♦ Upgraded and modernized lubrication systems

CUSTOM ENGINEERED MACHINERY:

- ♦ Calenders designed for specialized applications
- ♦ Materials handling components
- ♦ Special purpose attachments for mills and calenders

SERVICES AVAILABLE THROUGH ASSOCIATES:

- ♦ Millwrighting and rigging
- ♦ Fabrication, machining and erection
- ♦ Plant data acquisition and communications systems
- ♦ Equipment removal and installation

Gooch Engineering Associates
P.O. Box 10308
Southport, NC 28461
Phone: (603) 536-8180
Fax: (603) 536-4263
info@goocheng.com

Musco Engineering Associates
375 Morgan Lane – Unit 307
West Haven, CT 06516
Phone: (203) 932-1901
Fax: (203) 931-1550
Email: admin@muscoengineering.com
www.muscoengineering.com