



## INDUSTRIAL PROJECTS

Power & Monitoring, Inc. staff have prepared construction documents for more than 60 industrial projects involving 69KV and 34KV substations, 480V unit substations, 15KV power distribution, 5KV motors, switchgear, low voltage motor control centers, switchboards, instrumentation, electromechanical controls, and PLC and DCS computer control. These services were provided for the following Customers:

- \* Phoenix Color, Hagerstown, MD – Design of complete corporate campus site including Corporate Office Building, 3 Manufacturing Buildings, and Central Utility Plant. Site electrical needs approach 35MW requiring a new 35KV utility line. Included management facility planning at the corporate level involving periodic management meetings developing building scopes, site scenarios, long lead equipment buys, working with Contractors and Vendors on operational aspects, etc.
- \* Wheelabrator Pinellas Inc. – Waste Incineration Plant, St. Petersburg, FL – Retrofit three steam boilers and pneumatic instrumentation. Convert pneumatic instrumentation to electronic, provide new cable tray system, all new instrumentation cabling, upgrade Bailey System, convert electro-mechanical controls and single loop controllers into Bailey software.
- \* Glidden Durkee, Baltimore, Baltimore, MD. – 100,000 s.f. addition to Pigments Plant adding 1500 KVA of process equipment including 600 HP compressor.
- \* GM/Anchor Motor Freight, Baltimore, MD. – Environmental monitoring and fuel controls for \$110,000 Fuel Depot.
- \* Catalyst Research, Sparks, MD. – 15,000 s.f. addition to Cathode manufacturing line.
- \* Hazleton Animal Labs, Reston, VA. – Renovate 50,000 s.f. animal quarantine building.
- \* Hazleton Labs, Denver, PA. – 89 acre campus electrical distribution/emergency generator bank switching analysis.
- \* GE Nuclear Plant, Skajit, IL. - \$1 M Reactor Offgas System project for 4 sites including complete instrumentation and controls.
- \* Black & Decker, Hampsted, MD. – 60,000 s.f. office addition to plant.
- \* Lakehurst Naval Air Station, NJ – Evaluation and renovation of Lighting Protection System and Emergency Lighting Systems.

- \* Bethlehem Steel, Baltimore, MD and Burns Harbor, IN – DCS implementation including Control System hardware, operator interface, Intel microprocessors as process control computers, GE series Six programmable controllers for material handling of the steel, ASEA weigh scales, GEGA moving torch, Voest Alpine mold microprocessor controller and custom interfaces to a dozen microprocessor based specialty machines. Custom communication software had to be developed to allow these diverse machines to communicate together and exchange data in quantities and at speeds required by the real time needs of the process. C language programs had to be written for some of the applications code. All equipment was site tested and started up.
  
- \* Cement Plants – Central and South America: Scope and plan Cement Plant Control Systems including system configuration development, cost development, and documentation. Control System types included process control systems involving products by A-B, GE, Modicon, Siemens, high-tech instrumentation, robotic automatic sampling lines, and QCX systems.

Industrial Projects included DCS or SCADA Systems at:

Rohm & Haas, Inc.  
Air Products and Chemicals  
Nalco Chemical  
Copolymer Chemical and Rubber  
Pfizer  
Bethlehem Steel  
Lever Brothers  
US Steel