



*Industrial Applications  
...Concept to Completion*

# AUTOMATION AND CONTROLS

Optimization provides automation and integration services for a wide variety of process and manufacturing industries. Our engineers are experienced in providing requirements definition, functional specifications, system prototyping, implementation, testing, documentation and training. Optimization maintains relationships with most industry-leading vendors.

## CONTROLS AND INSTRUMENTATION ENGINEERING

With an experienced group of PLC programmers, Optimization can develop quality code developed for easy maintenance. Expertise covers most of the available hardware and software programming environments. Our engineers are skilled in the configuration classic DCS systems, PLCs, SCADA and HMIs. Instrumentation engineers in the group provide P&IDs, loop design and panel design and wiring. Our instrumentation expertise includes instrument specifications from basic parameters to complex process measurements like particle analyzers, web thickness gauging and color analyzers. Analytics are rapidly becoming a part of the routine.

## SOFTWARE ENGINEERING

Our software engineers continually learn and use the latest programming languages to achieve the proper system functionality and performance. Our team has experience with controls languages including those used in more current and legacy systems. Visual Basic, Python, Labview, C and C++, .NET, Microsoft SQL, Access and .NET. Expertise includes several S88 compliant languages for sophisticated batch and recipe control. Our state-of-the-art analytics software, Process Monitor, performs Industry 4.0 level analytics, detects operational performance and optimizes quality and throughput of manufacturing lines.

## ELECTRICAL ENGINEERING

Optimization provides electrical engineering for power, process control and automation industries. Our engineers are experienced in providing project services, and we are knowledgeable in NSPE and other national codes and regulations. Services include functional specification development, investigations, project management, arc flash studies, startup and debug, and 24/7 support. We can provide complete turnkey capabilities, leveraging our highly skilled journeymen electricians and technicians. Our electrical engineers are experienced in low and medium voltage applications up to 230 KV. We have knowledge and experience in load flow analysis, fault analysis situations, harmonic spectrum analysis, and multi-level protection coordination. We have worked with clients in reviewing their plant loads, updating their relay protection schemes, and providing seminars on their power system and ways to reduce their operating costs.

