

# Controller Tuning & Design, LLC Process Control Professionals!



## **You need to have logic changes made but who can you trust?**

This question comes up often for the user of automatic control systems. Often the owner will insist on contacting the OEM of the controller or the engineering firm that designed the system originally. The truth about these solutions is not pleasant.

The control system OEMs manufacture the hardware and software you use every day. They build control logic for the customer as an added service but it is not their primary focus. As a result once they design and debug a control system for a particular application it becomes the 'standard'. While they will give you repeated assurances during the sales meetings that they will customize the logic for you, in the end you get the 'standard' logic. Often you are told that "This is a better way" and move on. The reason this happens is that a cookie cutter control system costs the OEM far less than a custom designed one. This increases the profit margin for the OEM but it causes you, the system owner, to lose functionality and performance.

After the system is installed they will be happy to make additional changes for you but at what cost? The hourly rate is normally outlandish and they will focus only on a very narrow part of your system. This is like changing the tires on your vehicle to high performance racing tires while the spark plugs remain fouled.

What is needed is a company that can look at your entire system and how each component interacts with other components. This systemic approach is often the only way that difficult issues can be resolved.

As an example: A small swing in the fuel supply pressure, say 1%, can cause a much more noticeable swing in the final product of 10% or more. The typical response is to tune out the swing in the final product controller. This appears to work, however; the response of your plant is dramatically reduced. By carefully examining the fuel gas valve piping configuration, valve trim, flow characteristics, and logic design a solution can be found. Two gas valves in series were fighting each other and causing the swing. By properly changing the logic and retuning the entire system, the plant final product was stabilized and the response rate was improved to peak performance.

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When choosing an engineering firm to make your logic changes, make sure they are willing and able to understand your entire plants operation and not just focusing on one small area.

If you would like more information on choosing an engineering firm or if you would like to have an expert engineering firm evaluate your facility give us a call. We will evaluate your entire system and make recommendations if further work is necessary. All at a very cost effect price that is much easier to bring to your management.