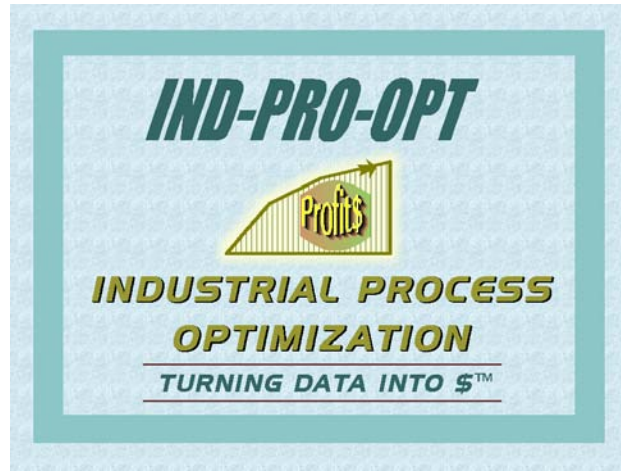


Who Is Industrial Process Optimization and What Do We Do?



About Us:

Industrial Process Optimization provides process control and control systems engineering consulting services, specializing in: advanced process control, the application of control-related information technology, and process optimization through process control. These services help clients diagnose and solve control-related process performance problems; and monitor, improve and optimize industrial processes. Industrial Process Optimizations' extensive engineering and operational experience in batch, pharma, and continuous specialty chemical and gases processes helps companies to improve the profitability of their plants and manufacturing facilities; and also to improve the productivity of the workforce assigned to these facilities.

Industrial Process Optimization also provides process control and information technology consulting and training services; including human machine interface development, engineering, and implementation assistance. Consulting and implementation assistance for the acquisition and analysis of batch and continuous process data may be provided, including providing recommendations for the systems and tools that monitor and improve process performance. In support of all activities, Industrial Process Optimization also provides limited photography services; including high-resolution digital photography, digital photographic editing, and photograph restoration and enhancement services.

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Our Story:

Complex industrial processes may sometimes develop problems or inefficiencies that may be difficult to discern and diagnose, especially when attempting to find the root cause. A typical process performance analysis and improvement work process is summarized as follows:

1. First and foremost gaining an in-depth process and operational understanding, primarily through analysis of existing process documentation (e.g., P&ID's, PFD's, and Material Balances) as well as visiting the manufacturing site, if at all possible.
2. Collecting relevant process and operational data at the proper resolution. If this task cannot be easily performed electronically, then the required set of historical data acquisition, trending, reporting and analysis tools could be recommended and implementation assistance could be provided to purchase, install and configure these systems and analytical tools.
3. Establishing a process performance measurement baseline and improvement objectives.
4. Depending on the nature of the process and the performance improvement objectives; developing a process model, if appropriate and feasible.
5. Isolating the root cause of any reported process performance problem(s.)
6. Developing a recommended scope of work to achieve process performance improvement; and obtaining consensus agreement, and revising it as needed to gain approval of the client stakeholders.
7. Assisting in implementing corrective action such as maintenance repairs or instrumentation or control system upgrades, if required.
8. Developing new or improved control strategies, if required and appropriate.
9. Evaluating process performance improvement actually achieved per the project objectives through appropriate measurement, data acquisition, reporting, and analytical techniques.
10. Recommending longer-term maintenance procedures and perhaps future additional instrumentation or control system upgrades for consideration to prevent the recurrence of similar problems; and to better monitor and optimize process performance over the long term.
11. Summarizing the project results in a final report, and presenting these results to the client.

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Methodology:

Techniques such as optimal controller tuning and controller performance monitoring; offline and/or online statistical data analysis; and various other statistical process measurement and control methods using appropriate tools such as ExperTune Inc.'s PlantTriage process optimization software may be applied to isolate problems, and achieve and maintain overall control and process performance objectives. Advanced control techniques such as feedback-feedforward, model-based, or model-predictive control may also be applied to achieve further process efficiency gains, if appropriate. In many cases, regulatory control improvements may be made that achieve the process performance objectives without requiring additional controls. To monitor and evaluate process performance, process data is typically collected, reported and analyzed using industry-standard data acquisition, analysis and reporting tools.

Our Promise:

After the project has been completed, the client will be able to clearly see and measure the process performance and human productivity improvement!