

## INSTRUMENTATION ENGINEERS AND CONTRACTORS

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## BENEFITS OF HANDS ON COMMISSIONING

By: Mike Kornas

**Commissioning is an essential process when it comes to ensuring that building systems operate effectively, efficiently, and safely as possible.**

Many of you are familiar with startup, commissioning and qualification, and there are many different ideas of how these processes should be organized, performed, tracked and reported. But every project is unique, requiring careful consideration as to the requirements specific to a particular facility, and one of the key components of a successful project is the commissioning checklist.

The quality and depth of a commissioning checklist can make or break the process. While a quality contractor can produce a commissioning checklist that is largely comprehensive, it is important during the planning phase to involve the people who are most knowledgeable about the systems and equipment, i.e. startup techs, instrument techs, BAS techs and vendors, who are familiar with problems, quirks and anomalies that can sometimes occur. The observations and input of these individuals is invaluable and should be incorporated into the commissioning process whenever possible. For example, who would know better how to prevent or correct a particular sequence-of-operation issue than the technician who is frequently called in to fix it? Remember: if potential issues are not covered and corrected during commissioning, they are likely to surface in qualification, a time when you can least afford problems and delays.

Omni has had the privilege to work with numerous quality commissioning firms and building owners, and we have played an integral role in many successful commissioning efforts. Please contact me, Mike Kornas, at (908) 523-0800 if we can assist you with your commissioning or retro-commissioning project.



## OMNI TECH TALK: Selecting A Flow Meter

**A flow meter is an instrument used to measure linear, nonlinear, mass or volumetric flow rate of a liquid or gas. In order to properly select a flow meter, one must evaluate the particular application. Here are a number of key questions to ask when making your selection:**

- ❖ What is the fluid being measured? Air? Water? Other?
- ❖ What is the viscosity of the liquid?
- ❖ Is the fluid clean?
- ❖ Do you require continuous or totalized flow rate information?
- ❖ Is the information needed locally or remotely?
- ❖ Should the transmission be analog, digital, or shared?
- ❖ What are the minimum and maximum flow rates?
- ❖ What are the minimum and maximum process pressures?
- ❖ What are the minimum and maximum process temperatures?
- ❖ Is the fluid chemically compatible with the flow meter wetted parts?
- ❖ Is this a process application? If so, what is the size of the pipe?
- ❖ Where will the flow meter be located? Careful consideration must be given to size of upstream and downstream piping / ductwork to prevent turbulent, erratic, low- or non-flow.



*Rosemount® 8800D CriticalProcess™  
Vortex Flowmeter  
by Emerson Process Management*

Not only should time and effort be invested in answering these questions, one should also consider such details as the abilities of plant personnel, their experience with calibration and maintenance, spare parts availability, etc. All of these are important considerations when calculating your overall costs. As with any instrument, it is important to select a flow meter that will provide optimal performance for your application, rather than choosing based on initial cost and trying to make it fit your needs. Such choices often end up costing far more in the long run.

## The OMNI Safety Corner

Omni Instrumentation boasts one of the best safety records in our industry, with 9 years of no recordable incidents.

Omni has participated in numerous OSHA VPP projects, and we are ISNetwork approved.



## MedImmune Wins FOYA

**Congratulations to MedImmune, LLC,**

Winner of the Facility of the Year Award for Project Execution for its Frederick Manufacturing Center (FMC) Expansion facility in Frederick, Maryland. Omni is proud to have served in this project as the instrumentation and controls contractor.

## FROM THE PANEL SHOP:

### Working With Vendor Panels

By Chris Czubowicz

**There are many different types of remote vendor control and instrument panels.** Some of the more common pieces of equipment that have one or multiple control panels are isolators (of all kinds), lyophilizers (freeze driers), fluid beds, and granulators, to name a few. The full size and location of a remote panel is often not determined until all general arrangement drawings have been submitted and approved. And, even after approvals, things can often change.

#### Here is some field advice on remote vendor panels:

1. Determine how many remote panels are needed.
2. Once the number of required panels is determined, care should be taken to minimize placement of panels, instruments and hardware within the process space. Costs and downtime can be greatly reduced by locating equipment where can be readily accessed for maintenance and service.
3. Panels must be coordinated and located properly as per code, with no waterlines above panels.
4. Make sure that, if VFDs are involved, drives are located within 100' of the motor they serve. (Check your manufacturer's specifications for their particular requirements.)
5. If possible, have your vendor ship enough wire and tubing from the FAT to the job site with adequate distance to reach your remote panels. This is a huge cost savings and allows a quicker installation if planned properly.
6. Make sure your panels have the proper finish and are recessed or surface-mounted as needed. Also, make sure they have the appropriate indicating devices mounted on the panel so a quick glance can tell an operator exactly what he needs to know.
7. Always ensure that panels are built for their environment, i.e. clean, explosion proof, pre-lit, or temperature sensitive.
8. Lastly, panels should be placed in the most optimal, user-friendly location possible.



**If you have any questions regarding vendor panels, please call Chris Czubowicz at (908) 523-0800.**