

OMNI FOUR-TIME ISPE FACILITY OF THE YEAR CONTRACTOR

By Mike Kornas

For the fourth time in six years, Omni was a participating contractor in an ISPE Facility of the Year Award-winning project. FOYA is a prestigious global awards program that recognizes innovation and creativity in manufacturing facilities serving the healthcare industry. The project, Grifols' \$340 million North Fractionation Facility in Clayton, North Carolina, won in the Project Execution category.

Working under an aggressive construction schedule, the 150,000 square-foot modular blood plasma facility, the largest and most technologically advanced in the world, was delivered on time and under budget. Using modular techniques, the project incorporated new centrifuge technology and expanded existing plant utilities.

Omni worked closely with designer and construction manager Fluor Corporation and collaborated with owners and users to **precisely locate all instrumentation and controls to ensure optimal ergonomics and functionality.** Weekly coordination meetings were held with process mechanical contractors to review piping and instrumentation diagrams (P&ID), and potential issues were resolved early on through the RFI process.

Omni has participated in three previous FOYA projects in 2008, 2010, and 2011. We are proud of our contribution to the 2014 FOYA Project Execution project and extend our sincere congratulations to Grifols, Fluor, and fellow participating contractors.

Inside This Issue:

- ▶▶ ISPE FOYA Contractor
- ▶▶ Controls Demolition
- ▶▶ Standardization
- ▶▶ Safety Corner: ISN / VPP
- ▶▶ Automatic Transfer Switches
- ▶▶ Hipot Testing



OMNI
INSTRUMENTATION
SERVICES, INC.

Omni

112A Sylvania Place
South Plainfield, NJ 07080
PH - 908.412.7130
FX - 908.412.7131
www.omniinst.com

OMNI TECH TALK: Controls Demolition

Although many renovation projects require removal and decommissioning of building automation and process controls, **it is rare for demolition drawings to indicate what must be demoed on control systems** and what is to remain. Physical removal of instruments and control wiring, however, is just part of the total picture. Field items must be removed from the front end graphics, sequence of operation, and logic, as well. This holds especially true on commissioned and qualified systems.

After decommissioning and demolition is performed, it may also be necessary to recommission the system or systems. Many large renovation projects require a significant amount of building automation and controls removal, replacement, and/or additions. Technicians must analyze the total system, from field wiring and devices to the front end, to ensure that the modified system performs to design intent. Device calibration should be checked as well.

Owners, engineers, and contractors should always take a holistic approach when performing renovations to control systems. It is always good practice to sit down during the planning stage to review the entire system and scope of work, and to do a walk-down of the system to assess the age and condition of existing equipment. This helps to avoid misunderstandings, finger-pointing, and unnecessary costs later in the project.



TECH TIDBIT: Standardization

When it comes to I&C, the best practice is to select product lines and communication protocols early on and **standardize across the board**. Facility owners often choose PLCs, VFDs, etc., from various sources to save money, but this approach is actually far more costly. Expenses are significantly greater due to multiple software licensing fees and the numerous gateways and interfaces necessary for network compatibility. Stocking spare parts is a headache, and having to deal with various vendors, rather than one or two, can greatly complicate matters.

The OMNI Safety Corner

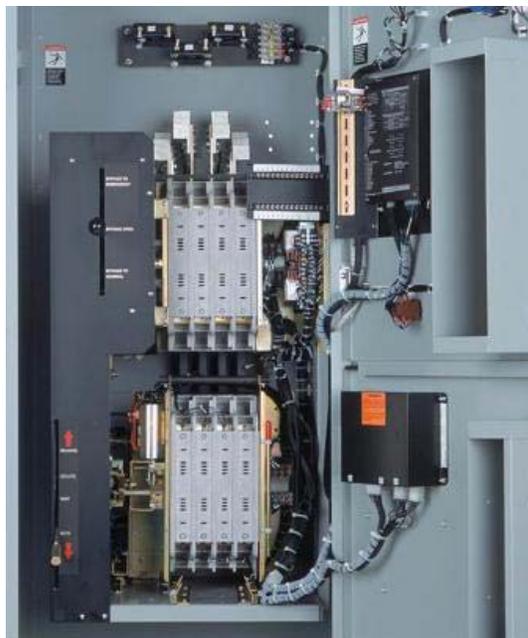
Safety is our #1 priority. As part of our continual commitment to training, compliance, and improvement, we updated our safety manual for Spring 2014.

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



FROM THE PANEL SHOP: ATS / Automatic Transfer Switch By Craig Drabyk

An automatic transfer switch, or ATS, is an electrical switch that monitors utility power for failure and automatically moves a load to a generator or other emergency power source during an outage. ATS are absolutely essential for large healthcare and mission-critical loads.



Today's ATS range in size and capability, from small 30-amp residential units to 5,000-amp switches for large commercial and industrial applications. Many generator manufacturers produce their own ATS switches. Most ATS are stand-alone in their own enclosure, but can be installed in a motor control center or substation lineup. Automatic transfer switches come in a variety of configurations with a broad range of functional options depending on application. Many provide seamless continuity of power during power transfer as well as preventive maintenance, switch inspection and testing, and system exercise, which must be performed regularly. Most ATS are fully programmable, and can offer a whole host of sequencing and monitoring options. Operation can be monitored through the BAS system, which can shut down or shed excess load and run an alternative sequence of operation when the building is on emergency power. Multiple ATS and generators can be linked via an Ethernet network.

Omni can educate clients on the many automatic transfer switch options that are available and help them make the best choice for their specific requirements. For information, contact Omni at 908-412-7130.

Hipot Testing

Hipot testing, an abbreviation of **high potential (high voltage)**, is a safety test that checks for good isolation between parts of a circuit and verifies the condition of insulating materials. Also known as a dielectric withstand test, hipotting

is useful for detecting nicked, crushed, or breakdown of insulation, stray wire strands or braided shielding, conductor corrosion, terminal spacing issues, tolerance errors in cables, and material or workmanship defects, any of which can cause a device to fail or inflict severe electrical shock.

There are three types of hipot tests. Insulation resistance testing measures the resistance of insulation between two points to verify the quality of the insulation. The dielectric withstand test checks to see if insulation can withstand a voltage above its normal rating for a given amount of time, and dielectric breakdown testing measures how much voltage can be applied before insulation fails.



Hipot testing of newly-installed cables is standard on most projects and should be done early on before permanent power is brought into a building. It should only be performed by a qualified professional. Working with high voltage comes with risk of electrical shock, so it is important to use hipot testing equipment that meets current requirements, and to strictly follow all safety regulations and manufacturer precautions.