

SIXNET[®]

APPLICATION STORY

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A Packaged System Wraps Up a Project in Just Two Weeks

A complete SCS control system including a pre-integrated combination of a SIXTRAK Packaged System, ISaGRAF programming and Citect HMI software is brought from specification to ready for production in just two weeks.

SYSTEM OVERVIEW

TIMET of Henderson, Nev., was expanding their production capacity by adding a titanium distillation furnace and vacuum condenser. TIMET makes high purity titanium used in aircraft parts, racing engines and other low-weight products. They are the largest producer of purified titanium in the world with plants in many countries.

QTY	PART NUMBER	PART DESCRIPTION
1	PAK4836-ST	Steel 48x36; Nema 4 system
2	ST-CABLE-PF	PC to Gateway/RTU RS232 Cable
3	ST-GT-ETH-24P	Gateway; programmable; Ethernet; 256K
4	ST-AHNS-08U	8 Channel; 16 Bit Instrumentation Inputs
5	ST-DI-120-08U	8 Channel; 120 VAC; Universal Base
6	ST-DO-AC1-08U	8 Channel; 120 VAC; Universal Base
7	ST-SPF	SIXNET Plant Floor Software
8	ST-SCR	SIXNET Control Room Software
9	ST-1131-256	ISaGRAF Workbench for 256 I/O

Their present control system is run by a Toshiba DCS system. With the new furnace and condenser ready to go online, Toshiba said it would be months before they could deliver the new hardware needed for the expanded plant. And once the Toshiba parts were delivered, more time would be needed to install and integrate them into the working system.

SIXNET System Planning software quickly designed the I/O cabinet for TIMET.

SAJE Technology, a Scalable Control Systems applications specialist,

Problem: TIMET needed to bring an additional process online quickly but their DCS vendor was taking excessive time to deliver the new system components for their aging DCS system.

Solution: SAJE Technology implemented a complete Scalable Control System, complete with a fully assembled and tested SIXTRAK Packaged System (I/O cabinet) in just over two weeks.

was called in to provide a rapid solution so that the new equipment could be used while waiting for the Toshiba hardware. After the system requirements were agreed upon – control and datalogging on the new furnace and condenser – a SIXTRAK Packaged System was specified using the SIXTRAK System Planner software.

The panel layout and a bill of materials for the control cabinet both were generated by this easy to use software and sent to SIXNET for creation.

Within days, a NEMA 12 enclosure complete with a SIXTRAK Programmable Gateway (the DCS controller), approximately 150 SIXTRAK I/O and all accessories was delivered to the plant and ready to install. The **SIXNET QuikShip** service was used to send the cabinet by overnight containerized air freight.

The guaranteed flawless delivery of this Packaged System (**SIXNET SureShip**) had the system in the installers hands on the fifth day of the project. The direct field wiring feature of the SIXTRAK TrakPak sped the process of installation in the plant.

At the same time, TIMET's consultant created an ISaGRAF program to control the process using the powerful Windows tools in the ISaGRAF Workbench. Ladder Logic and Function Blocks were used to do the recipe management. The ability to use Jumps and Labels in ISaGRAF made the programming easier and allowed a variety of specialized control changes during the running cycle. The process was easily simulated before integration with the hardware with the help of the ISaGRAF I/O simulation tools.

The I/O tag definitions from the ISaGRAF program were then directly imported into Citect. This SCS system feature of sharing tags not only saved time, but it eliminated all data entry errors and enabled SAJE Technology to almost instantly create the required Citect screens. The design cycle was accelerated by Citect's enhancements that quickly emulated the existing Toshiba screens. Without the hassles of I/O driver installation, the SCS system was ready for installation as soon as the application configurations were complete (two and one half weeks).

The powerful concept of pre-integrating a complete system prevented lost production time and great expense for Titanium Metals. SCS technology turned this difficult situation into a simple solution.

<p style="text-align: center;">SYSTEM COMPONENTS</p> <p>PAK3630 Packaged System:</p> <ul style="list-style-type: none">• 5 Instrumentation analog input modules• 4 Eight channel discrete output modules• 3 Eight channel discrete input modules• SIXTRAK Ethernet Programmable Gateway• SIXNET Plant Floor Software• SIXNET Control Room Software• ISaGRAF IEC 1131-3 program• Citect SCADA software
