# *Application Highlight:*

## *The UK based company Coal Products LTD migrates their Control and HMI to CTI 2500 Series® / zenon® System*

Coal Products Ltd (UK) selected the CTI 2500 Series®/zenon® HMI/SCADA solution to migrate two obsolete plant lines control and HMI systems composed of SIMATIC/505® PLC and CVU 10000.

The Coal Products site located in Immingham (United Kingdom) produces various products based around smokeless, high performance alternatives to house coal designed for use on domestic appliances, open fires and stoves. The process involves the blending and then briquetting of coals and biomass using a variety of binders to produce specific fuel performance. Their optimized combustion products are cleaner, more efficient and have significantly reduced the environment impact.

The 2 lines involved in this migration project produce over 300,000 tonnes/year of solid fuel briquettes.

After a first successful line migration in 2014, the company decides to migrate a second line with the same CTI® / zenon® system in 2015.

For several decades, each line used 2 old Texas Instruments®/Simatic® CVU10000 for process monitoring and control. Facing difficulties in maintaining HMI hardware and software (running under MS-DOS), Coal Products started looking for a modern control and supervisory solution which efficiently ensured the long term reliable operation of this plant. The decision was made in favor of the turnkey migration solution based on a CTI 2500 Series®/zenon® system, offered and executed by NAPA International France.

The 2 zenon® supervisory systems operate from 2 inexpensive standard PC running Windows® 8.10 and communicate with the CTI 2500-C200 PLC over an Ethernet network. Access to CTI CPU diagnosis from supervision is just one mouse click away.

Each zenon® PC has three 22’ LCD screens attached to allow the operator to simultaneously display several process screens or alarm list or trend views.

## Automated task reduces engineering and error risk

Mastering HMI migration from mature HMI/SCADA systems from Texas Instruments and Siemens connected to SIMATIC® 505 PLC's, NAPA International France engineers have developed various tools to extract as much configuration data to semi-automate zenon® engineering.

Customers often request their new system to have a similar look and feel as their old system in order to limit operator training to a minimum. Thanks to full configuration oriented approach, it is very easy to achieve this goal with zenon® and to re-use objects already developed in previous migration projects, such as CVU10000 Alarm or Loop Summary, Groups and Tune details.

Configuration of the zenon® system is faster and less expensive for the customer. The old views of the CVU10000 HMI are used as a background to design new zenon® views, and the list of variables, along with their description and PLC memory address, is generated from the text file exported from the CVU10000 system database, converted to xml for zenon import. This process minimizes the time spent making the migration, but more importantly minimizes the risk of human error during engineering.

**The CTI 2500 Series®/zenon® system provides the most economical and lowest-risk solution for revamping CVU10000 and other discontinued supervisory systems such as TISTAR®, SIMATIC® PCS OSx or SIMATIC® PCS7/505 DBA.**

Because this solution requires no replacement of the PLC system or rewriting of the existing PLC programs, it is very economical compared to alternate approaches. There is also much lower risk in the migration since the PLC process control program is untouched. And very importantly, there is no extended downtime required to recommission the system.

In this project, downtime was limited to only a few minutes required to replace the Simatic® 505 PLC with its CTI 2500 Series® equivalent. On the first production line, revamped in 2014, Coal Products run both systems (CVU10000 and zenon®) in parallel for 1 month so that their operators felt even more secure. After 1 month, and without production stop, the old CVU10000 was completely removed.

The second line revamping realized in 2015 also included the migration of a CVU10000 to zenon® and the replacement of a Simatic® 505 CPU to CTI. Additionally it included the migration of an old WonderWare® system for 128 motors CCU control into the same zenon® interface. The 3 systems ran in parallel for 3 months before zenon® completely took over.

Karl Dixon, Maintenance Electrical Engineer at Coal Products:
"…We were dreading the process of migrating to a new control system but with the help of NAPA and the versatility of the new zenon® system we were able to do so without downtime or system errors…"

If you have Texas Instruments®, Simatic® 505 or CTI 2500 Series® PLCs in your plant and are thinking about modernizing your PLC or HMI/SCADA installations, do not hesitate to contact us to discuss your requirements and obtain a detailed demonstration of our solutions.

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