Servelec Controls has been awarded numerous contracts by a large manufacturer of hydrogen energy systems to design, supply and install control systems for various containerised water electrolysis plants located in the UK and overseas. In addition Servelec Controls provided a SCADA system which allows full local and web-based visualisation and control of electrolysis plants based on the client’s premises.

The Servelec designed systems provide:

- Holistic view of all production and commissioning plants.
- Smarter maintenance and diagnostics.
- Remote control of plants.
- Improved monitoring and analysis of production.
- Alarm and event distribution to remote uses (including mobile devices).
- Mobile access to plant data.
Solution

Servelec Controls’ extensive knowledge was utilised to provide process control and safety systems which satisfy the client’s specific user requirements. Each system had unique safety and control requirements which necessitated individual specification and design.

Each Servelec solutions adhered to the clients’ specific functional safety and hazardous area assessments. The design utilised Siemens fail-safe PLC controllers and safety I/O modules with suitable SIL protection to meet a number of client defined Safety Instrumented Functions (SIFs). Intrinsically safe barriers were used to provide a safe interface to the hazardous area signals which originated in Zone IIC T4, and SIL safety contactors were used to isolate equipment under critical safety failure.

The Servelec supplied SCADA system was based on a Siemens WinCC solution. It incorporated remote TCP/IP access to sites, duplication of plant screens for visualisation and control of each plant and historian functionality for data logging and analysis.

The Servelec Controls’ scope includes of:

- Specification, design and configuration of system architecture, based on Windows Server and Virtual Machines/Clients, using a range of Siemens WinCC utilities.
- Design of HMI Mimic/Control screens for each plant.
- Installation and full commissioning of the SCADA at the client’s premises.
- Full support, including additions of new plants.
- Control hardware specification, design, build and test at Servelec premises.
- Full design compliance with Ex/ATEX requirements.
- Installation of the control panels into the containerised system, including all electrical and instrumentation connections throughout including CompEx certification.