

## CASE STUDY

### Package Boiler Controls Upgrade

<b>OUR CLIENT:</b>	<b>Methanex – Waitara Valley</b>
<b>INDUSTRY:</b>	Chemical
<b>VALUE:</b>	NZ\$2M
<b>OVERVIEW:</b>	<p>The Methanex Waitara Valley site was restarted in 2013 after a shutdown period of 5 years. One of the key projects was to upgrade the control systems for the two package boilers supplying steam for the plant.</p> <p>As the boilers had not run for five years a study was conducted to ensure compliance with regulatory guidelines (NFPA 85 and the NZ Boiler code).</p> <p>In addition to a full mechanical refit, the study concluded that the existing Modicon PLCs and associated control systems were obsolete.</p> <p>It was decided to replace the control systems and PLCs with new equipment, the Modicon PLCs were to be replaced with Hima HIMatrix SIL3 rated Safety PLCs.</p>
<b>ENGINEERING:</b>	<p>ECL TÜV certified functional safety engineers were involved from the design of the controls systems, development of the project documentation, through to testing and commissioning for both boilers.</p> <p>The Hima HIMatrix range of SIL3 rated safety PLCs were utilised (F60, F35, F3, F2), this allowed upgrading of the communications between the boilers from Modbus RTU to Hima Safe Ethernet, a validated version of Ethernet communications..</p> <p>The Modbus RTU communications for each boiler to the Honeywell Experion DCS were upgraded to Modbus TCP/IP.</p> <p>The successful completion of the commissioning for the boilers was on the critical path of the site project schedule to begin running up and restarting the site. Without the boilers the rest of the site would not have steam and would not be able to begin running up.</p>

- The successful commissioning of the boilers allowed the rest of the site to begin running up, ready for production.
- The project was completed on time, in budget with no lost time incidents.



#### NEW ZEALAND

P: +64 6 757 5562 | E: manager@ecl.co.nz  
 166 Powderham Street | P.O. Box 247 | New Plymouth 4340  
 New Zealand

[WWW.ECL.CO.NZ](http://WWW.ECL.CO.NZ)

