




# PURGING CASE STUDY

Wireless Remote O2 Sensor for  
Pipeline Welding fitted to  
Internal Line Up Clamp

The Validation Centre (TVC) Limited

In the pipeline welding industry, it is commonplace to use an Internal Line Up Clamp (ILUC). This will align the two pipe sections using internal hydraulic or pneumatic rams so that external automatic welding equipment can be used to weld the root pass. When welding duplex or Inconel clad pipes, the ILUC will also have a purge dam fitted.

**The ILUC may already have some O2 monitoring built-in, however, sometimes the factory supplied option is:**



NOT ACCURATE ENOUGH  
AT LOW LEVELS

CANNOT PROVIDE ADDITIONAL  
EXTERNAL SIGNALLING

We have been asked by client's in the onshore and offshore pipeline welding industry on many occasions to supply a retrofit kit that provides accurate low level O2 measurement with remote display and signalling.

## CUSTOM-DESIGNED SENSOR MODULES

- custom-designed zirconia and optical oxygen sensor modules with an internal sampling pump
- can be remotely controlled
- designed to work from the 24V DC internal supply on the ILUC

Remote Hand Controller Unit and Traffic  
Light Visual / Audible Warning Beacon



## SOLUTIONS

### PROGRAMMED ALARM LIMITS

- can be programmed with alarm limits and provides an external display of the O<sub>2</sub> levels down to 1ppm
- traffic light visual system displaying red, yellow, and green lights as well as audible warnings (based on high and low pre-programmed alarm levels)
- full onboard data-logging facilities available to digitally record data for purge time and levels for reports after welding is completed



## CREATING SOLUTIONS FOR YOU

Modules are **customed-designed** to meet our client's specific requirements.

If you have any application that requires **automated remote monitoring of purging for welding applications**, contact us.

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