



## Pressure Vessel Construction at Priorclave

At Priorclave we aim to manufacture as many components as possible ourselves giving us close control over quality and manufacturing times.

To this end we are an approved manufacturer of Pressure vessels and systems for our autoclaves with our manufacturing processes and designs carefully scrutinised by **Zurich Risk Services Birmingham (Notified Body Number: 0037)** against:

**EC Pressure Equipment Regulations 1999 (European Pressure Vessel Directive –97/23EC Conformity Assessment Module D)**

**Construction Code PD5500: 2006 CAT3**

In addition to and as part of our approval our manufacturing is carried out under a quality system approved under **BS EN ISO9001:2000**. The scope of this system includes the category of **Boilers and Process Plant Fabrication**.

All Pressure vessels manufactured in-house and tested with water to 1.5 times their maximum working pressure for 30 minutes to check the integrity of all welds and all are subjected to a full test and inspection at working steam pressures.

Our pressure vessels are only made from grade 316L stainless steel for its superior corrosion resistance over other grades.

### Cylindrical Vessels



The vessel shell is precision cut and punched using CNC machinery.

It is then rolled and carefully tacked together before the vessel seam weld is carried out using our semi-automatic welding machine.



Following this, the precision machined Grade 316 stainless steel header ring and stainless steel dish end are welded in place.

## Rectangular Vessels



5mm 316 stainless steel plates are folded and welded together by our highly skilled coded welders in our fully equipped welding bay. Tubular re-enforcing members are precision fitted and welded around the outside of the chamber and the header and back plates welded in place.



Tubular re-enforcement members being welded to an air-cooled 700L Rectangular Section Chamber under PD5500 coding



## Steam and Water Jackets

The Priorclave Steam and Water Jacket features a sectional design to provide structural support for the chamber. The transverse sections are connected by longitudinal sections, which act as a manifold, allowing movement of steam or water through all of the jacket sections.