

## Tendon Monitoring – Oldbury Nuclear Power Station

**Tendon load checking, corrosion monitoring and strand replacement to Reactor Building primary containment structure.**



Oldbury Power Station

**Client**  
**Post tensioning specialist**  
**Site programme**

**Magnox North**  
**Balvac**  
**2004 to 2009**

In Oct 2004 Balvac won the contract to carry out tendon monitoring works at Oldbury Power Station. The initial award was for annual visits over a three year period, with an option of a further two years. This option was taken up by Magnox.

The tendons at Oldbury each comprise 12No strands in a (now obsolete) male and female cone type anchorage. Great care was required in the setting up of multistrand jacking equipment for load checking to ensure even load take up between the strands, and thus minimise the likelihood of wire breakages.



Horizontal tendons

All works were carried out strictly in accordance with Magnox work procedures, using stressing equipment owned by the station since it was originally constructed. Completed QC record sheets for the various tasks were handed to Magnox for review.

Each visit comprised a schedule of jack calibrations, visual inspections, load checks, shimming and tendon corrosion samples (detension, remove & sample, replace, stress). Occasionally, additional tendon replacements were instructed as a result of the discovery of significant tendon corrosion. All tendon surveillance visits were completed within the required programme.



Stressing console

Balvac are the UK and Ireland licensee of the MK4 Post Tensioning System, and are CARES QA certified for internal and external, bonded and unbonded, post tensioning systems for a wide range of structures such as bridges, building slabs, tanks and silos.

Balvac also carry out tendon monitoring works at other power stations.

# Balvac

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