

Boiler closure units

Edf Energy

Inspections of the Boiler Closure Units (BCU) during a Hartlepool outage identified a number of significant defects in the pre-stressing wire winding system over several BCUs. These were considered to significantly undermine the safety case for continued operation as a result of which, Heysham 1 and Hartlepool were closed down and British Energy mobilised a project team to engineer, procure and install solutions to allow the stations to be repowered.

Atkins provided a team of up to 50 people to support this project and provided the solution to return the reactors back to service by designing a circumferential steel band to lock in the existing pre-stress in the wire windings. Nine of these bands were fitted to each BCU to provide frictional restraint of the wires underneath effectively acting as an additional layer of passive wire winding.

Atkins also designed an environmental control system to protect the wires and bands from corrosion, a modification to the existing BCU cooling system, and the fitting of a thermal shield to replace the original fillite insulation that was removed to install the bands.