



COSTAIN



Industrial cooling

Full-service brochure

Improving people's lives.



Our chemical cleaning processes improve operational efficiency, help extend the life of equipment, plant, and pipework, and enhance compliance with legionella prevention and control measures.

Industrial cooling

Helping major UK process and industrial cooling companies to reduce environmental impact, address climate change and reach net zero targets, through innovative, bespoke solutions for safe and efficient plant operations.

Services

- Cooling tower installation
- Chemical cleaning
- Clean and disinfection
- Digital structural timber testing
- Condition monitoring for evaporative cooling towers
- Cooling tower maintenance, repair and spare parts.

Costain offers a holistic approach to asset optimisation and management in the industrial cooling sector. Our clients within power generation, chemical, petrochemical, food, cement, steel and general manufacturing industries are governed by stringent regulations and legislation in terms of industrial cooling. We offer inspection regimes tailored to your asset requirements, carried out by specialist personnel during both planned outages and impromptu stop periods. Repair and maintenance procedures are engineered to suit the client's requirements to resolve faults found and ultimately improve performance.

Solutions

Cooling tower installation

Our cooling tower lifecycle services include supply and installation for blue-chip companies that are involved in activity critical to the UK. With extensive experience implementing complex projects, we provide engineering capacity, project management, supervision, and qualified, skilled labour to your requirements.

Our supply and installation service covers the following systems: counter flow cooling towers, cross flow cooling towers, mechanical draught cooling towers, forced draught cooling towers, natural draught cooling towers, hybrid cooling towers, package cooling towers, quench tower and heat exchangers.

Detailed inspections

Evaporative cooling towers should be inspected by competent cooling tower engineers. Failed or deteriorating components compromise performance and can lead to an unexpected or catastrophic failure. Costain offers thorough cooling tower inspections and tests that are carried out by experienced engineers who can determine compliance with the Health and Safety Executive's Approved Code of Practice and guidance (ACoP) L8 document, the integrity of structural and internal components and overall cooling tower performance. Our inspections cover all types of cooling towers and include all individual associated passive and mechanical parts. Inspections are followed by full written reports including photographic evidence where permitted, highlighting any areas of concern or areas requiring further investigation.



Over 40 years' experience
in the cooling tower industry
ensures optimal operation
performance and best
reliability



Chemical cleaning

Our chemical cleaning processes improve operational efficiency, help extend the life of equipment, plant, and pipework, and enhance compliance with legionella prevention and control measures. We provide safe, economic, and effective services for both specialised and routine cleaning. This minimises disruption during pre-commissioning and routine maintenance of plant and equipment.

Clean and disinfection

We provide cooling tower cleaning services based on a wealth of knowledge and experience, combined with innovative techniques, tools and cleaning products.

Our cooling tower cleaning services guarantee that your plant and equipment are operating within the appropriate laws, guidance, and legislation. Upon completion, a 'Certificate of Cleaning' is issued, as required under Section 68(g) of the Health and Safety Executive's Approved Code of Practice and guidance (ACoP) L8 document.

Digital structural timber testing

We measure and compare current performance against the original design specification to identify levels of efficiency loss through incorrect usage or deterioration, using comparative data. We advise on the measures required to restore or improve performance.

Condition monitoring for evaporative cooling towers

We provide a range of condition monitoring services to allow maintenance to be scheduled, or actions to be taken to avoid the consequences of failure, before this occurs. Services include vibration testing and analysis; dynamic balancing, laser alignment; and endoscope inspections.

Cooling tower maintenance, repair and spare parts

Costain provides a full range of services from annual cleaning, through to fully comprehensive maintenance. These are designed to complement or completely replace in-house cooling tower maintenance, repair, and spare parts maintenance regimes.

Project experience

PX Power Limited: Refurbishment of wet cooling tower

Challenge

Costain was engaged to design a replacement support system that could be installed on a cellular basis avoiding the need to shut down the entire cooler.

Solution

The team's solution was to access the inside of each cell using suspended access techniques to replace each layer of packing, at the same time new specially designed stainless-steel hanging straps were installed to support the lower pack.

The hyperbolic cooling tower is constructed of concrete and comprises four quadrants each with a 1250m² of PVC packing. Our innovative approach enabled the tower to remain operational throughout as each cell was

refurbished on a rolling basis without affecting generating capacity. This approach was vital as the single cooling tower would otherwise have required a complete shutdown and loss of generating capacity.

Outcome

The project avoided the need for a complete outage at the power station and the repair solution will significantly enhance operational life. This is an example of one of many innovative solutions that Costain can apply to reduce maintenance costs and increase life span. The site team received a commendation from PX Power and we have further developed this method of operation to wherever practical, to minimise client outage and shutdown requirements.



Contact



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Specialisms:

- New or replacement cooling towers
- After market spares
- Repair and maintenance
- Major refurbishment
- Detailed condition inspection and reports
- Complex programme delivery
- Endoscopic Pack Media Inspection

Costain is the proud holder of the Royal Society for Prevention of Accidents (RoSPA) Order of Distinction. The Order of Distinction is achieved by maintaining a high safety standard and 15 consecutive gold awards.

