cooling tower replacement

case study / rolls royce / bristol
providing 500kw of heat rejection to process water...

SITE REFERENCE: Rolls Royce
SITE LOCATION: Bristol
BUSINESS SECTOR: Aerospace

SCOPE OF WORKS:
- Use existing process pumps for process primary side
- Introduce indirect cooling system via plate heat exchanger
- Supply & install duplex pump station c/w capacity control valve
- Install air cooled chiller to provide 500kw heat rejection to process water
- Install bespoke panel for the automatic control of the primary process and chilled water system

PROJECT DESCRIPTION:
To avoid the ongoing risk of legionella our client required an old cooling tower to be removed and replaced with an efficient and economical system. Integral replaced the cooling tower with an indirect cooling system. This allowed some existing components to be reused.

The cooling tower was removed from the system, the pipework reconfigured and diverted into a Plate Heat Exchanger.

The other side of the heat exchanger saw the introduction of a duplex pumping station c/w with 3 way capacity control valve. The addition of a Daikin Air Cooled Chiller provided approximately 500kW of heat rejection to the process water.

The old basic panel was replaced with a new bespoke control system that automatically controlled not only the process side, but also the Chilled Water system.

Following some initial preparation the work was carried out over a long bank holiday weekend shutdown. Production was handed back to the client following successful hot trials at 2pm as per the tight deadline.

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Completed stages with insulation added.
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