Case Study OCS231

Rolls Royce Disc Manufacturing Facility | *Tyne & Wear 2014*

The new Rolls-Royce £100m advanced aerospace disc manufacturing facility, officially opened by Nick Clegg and Vince Cable in Washington, Tyne and Wear has the capacity to manufacture 2,500 fan and turbine discs a year.

These discs will feature in a wide-range of Trent aero engines including the world's most efficient aero engine the Rolls-Royce Trent XWB. Fan Discs and Turbine Discs are at the heart of the engine, operating in extreme conditions providing the engine's thrust.

Key Points

- Trend IQ3 network
- Trend 963 Supervisor
- Modbus Meter Monitoring
- VAV Terminal Unit Control
- BACnet Inverter Monitoring
- Alarm Monitoring
- Modbus Air Conditioning Interface

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Providing excellent service whilst at the heart of clients requirements

Ground-breaking manufacturing techniques include the introduction of robotics and automation for shot peen, painting and chemical processing operations as well as latest advanced platforms for machining, grinding, broaching and inspection processes. This has reduced the time it takes to manufacture a disc by 50% while producing a step-change in component performance.

Open Control Solutions were engaged by Balfour Beatty Engineering Services to supply and install a new BEMS system to control the mechanical services throughout the building

The heating, ventilation, domestic water plant, and external lighting is controlled and monitored by a comprehensive Trend Building Management System, complete with a BEMS head end graphics package.

The building management system comprises of intelligent building controllers placed within each of the fifteen control panels situated across the site.

Of particular importance was the accurate control of the temperature and humidity in the various test and calibration areas. High accuracy sensors and close control of the Air Conditioning units via Modbus interfaces were utilised, with an alarm raised at the BMS if any of the conditions go out of the acceptable limits.

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