Modernize your Turbomachinery with Digital Control & Updated Actuation

Honeywell CCC

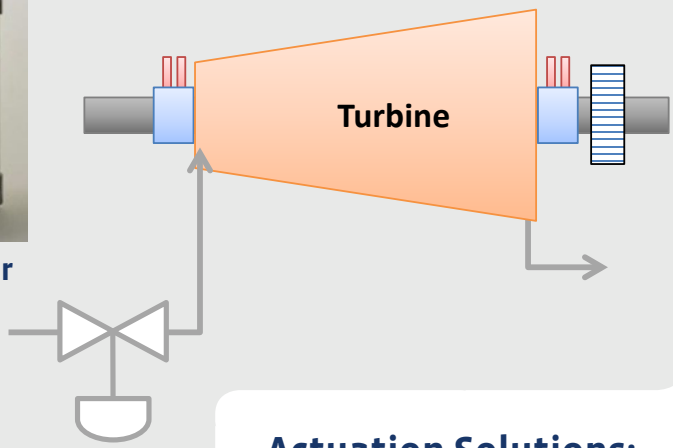
Increase machine performance, improve safety & reduce maintenance costs with a steam turbine mechanical retrofit.

How it works

Upgrading existing steam turbines from mechanical governors to digital governors requires retrofitting the steam turbine with a new steam valve actuator and adding speed sensors to measure turbine shaft speed. Electronic speed control improves the precision of turbine speed control which results in smoother process control. The electronic overspeed trip system increases turbine safety by reliably shutting down the turbine should an overspeed event occur. A variety of valve actuator options are available from pneumatic, electronic, hydraulic, and electro-hydraulic to suite your needs.

Turbine Deck

Local Operator Panel



Speed Gear Pickups

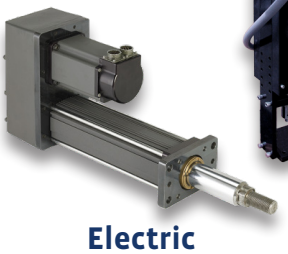
Actuation Solutions:

Control Room

Prodigy Controller

Pneumatic

Electro-hydraulic



Electric

Servomotor

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Repeatable Start-ups & Minimized Process Upsets with Precision Speed Control

Upgrading your turbine from an old OEM mechanical or hydro-mechanical governor to the latest technology in digital speed control will enhance your turbomachinery performance. Once you upgrade your old mechanical governor with digital control, you will find that the turbine speed can easily be controlled with a few rpm range. The final result is smoother process control and less chance of process upsets. Turbine start and stop sequencing is reliably consistent and also eliminates the need for hand control of a manually operated trip and throttle valve.

Shorter Turnarounds with Pre-Designed Retrofit Kits Already Assembled & Calibrated

Collaborating with you at the proposal stage provides a chance to review the various actuation options available, such as low thrust small actuator retrofitted to existing hydraulic pilot mechanisms all the way to a high thrust large actuator retrofitted to the main steam valve rack. Speed measurement kits are also evaluated and selection of passive or active speed sensors is determined, as well as the quantity required. Once a design is selected, CCC visits the site to collect data and dimensional measurements of the turbomachinery. At turnaround, a CCC mechanical engineer can be dispatched to site if required for installation supervision of the mechanical retrofit.

Why CCC

From the proposal stage through the installation stage, we provide all phases of work required to provide a mechanical retrofit tailored to the end user's needs and preferences. CCC provides mechanical retrofit services including site survey, detailed design, component fabrication, and installation supervision where needed. Regardless of which original equipment manufacturer, CCC has developed a vast library of reliable and field proven actuation solutions. Mechanical retrofit designs have been made for over 150 speed measurement applications, more than 270 valve actuation applications, and even include inlet guide vane actuation applications.

Additional Applications Ideal for Mechanical Retrofit:

- Gas turbine guide vane control
- Gas turbine nozzle control
- Compressor antisurge valves
- Compressor inlet guide vanes

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