As good as new

Retro-commissioning is the missing link for improving HVAC plant performance.

Commissioning plant systems–such as boilers, chillers, towers and pumps—used to be a one-time event. But in the quest for ways to keep building performance high and operational costs low, on-going and retro-commissioning maintenance is becoming part of a best-practices regimen. Modern Building Automation Systems (BAS) can provide some of the benefits of on-going commissioning. The self-tuning controls of BAS systems often cover up poorly operating buildings, however. So both buildings with and without BAS need regular inspections and calibrations. If the building equipment was never properly commissioned in the first place, a retro-commissioning is important to evaluate, baseline and make changes to maximize system efficiency. Older buildings with fewer or older controls require more footwork, measurement, analysis and often upgrades.

Start with preventative maintenance:

- Measure voltage, current, phase and temperature of electrical equipment and compare to previous records to determine changes in sequence and operation
- Change filters and measure pressure drop of filter banks
- Check RPM of motor-driven equipment of pumps and fans to find drive problems

Calibrate critical sensors wired to building automation controls. Sensors that are even a few units out of calibration will cause systems to consume excessive energy.

Log temperature, pressure and humidity values and compare to ASHAE or other comfort standards.

Check air, water, and steam flow rates with data loggers or field calibrators. Change in flow rates could indicate a fouled heat exchanger, piping or pumping problem.

Check air, water and steam pressures and compare to BAS equipment readings and design values to identify efficiency loss.

Measure indoor air quality values such as CO_2 ppm and correct deteriorations.

TMA-21HW
Hot Wire Anemometer for monitoring air flow and indoor air quality

TMD-55W
Multilogging Digital Thermometers with wireless communication

TACH-20
Combo Tachometer for measuring rotational and surface speed

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