ENEXIO

ENERGY.
ENGINEERING.
EXCELLENCE.

ENEXIO – YOUR RELIABLE PARTNER FOR POWER COOLING SOLUTIONS AND SERVICE SINCE 1920

Extend your power plant life time and boost MW output by increasing Condensing Capacity with ENEXIO ACC Rebundling.

ENEXIO – as the inventor of the Air-cooled Condenser – has played a leading role in the evolution of this technology. We are known for our comprehensive expertise in the field of power plant cooling technology and we offer the whole range of services for dry cooling systems.

Power plant deficiency can be deeply rooted in ACC performance deterioration like ageing, fouling, and scaling of the ACC tube bundles. The magnitude of reduced ACC performance is typically unknown and therefore customers are not aware of the potential improvement new tube bundles can provide. ENEXIO is the expert to transparently calculate the impact of ACC bundle deficiency on generation output and the revenue growth potential through rebundling.

Low Impact Upgrade

- Short erection time (feasible during planned outages)
- Minimal to zero modifications to existing structures and mechanical equipment
- No additional auxiliary or mechanical equipment required
- Zero additional operational costs compared to other major capacity additions

Improve Plant Operational Reliability

- Single-row ALEX bundles of ENEXIO, used in our rebundling programme, inherently less prone to freezing than multi-row elliptical tubes
- Proven freeze protection in extreme locations
- New air-tight bundles greatly reducing air in leakage

Reduce Maintenance Costs

- Shorter Cleaning Times, more Effective Cleaning, and Reduced Cleaning Water Usage
- Eliminate recurring annual repairs to damaged tubes

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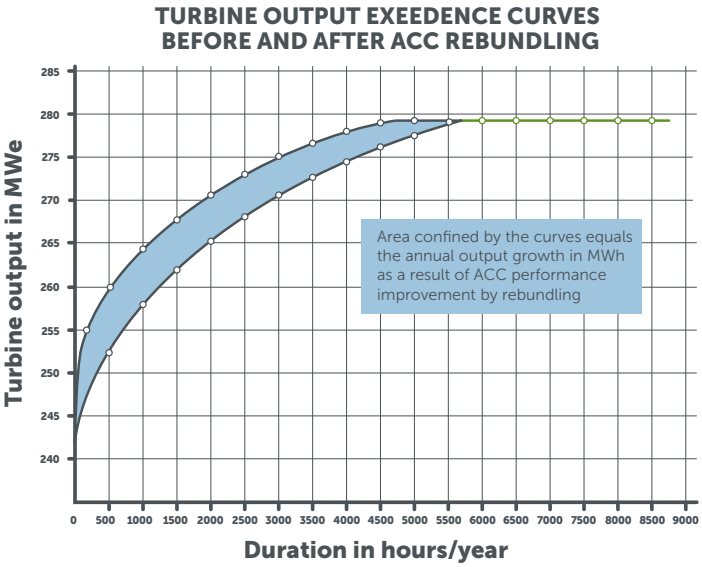
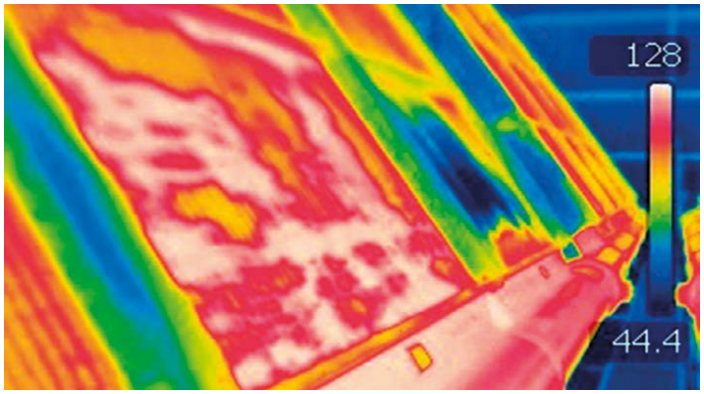
IS YOUR ACC COSTING YOU MW?

Typically, a 1 in Hg change in steam turbine back pressure corresponds to a 3% change in STG MW output.

Typical bundle deficiencies include

- Fin separation from frozen tube damage
- Debis trapped behind support beams
- Air leaks at tube/header connections
- Severe debris build up on tube fins rom sources such as dust, cottonwood tree seeds, pet coke and flyash
- Obsolete thermal design of multirow condenser limits turbine output
- Ruptured/burst tubes left behind freezing winters





IR thermal imaging helps detect tube leakages

Present Value (PV) based life-cycle revenue analysis:

$PV = (P_{revgro}) / A - I$ where

- **I** → ($) total "cooling system convesion" related investment cost
- P_{revgro} → ($/year) annual revenue growth (delta ($) between water cost savings an MW output change due to dry cooling)
- **A** → (1/year) annuity (= i/(1-1/1+i)^n); i = interest rate%; n = life cycle (year)

ENEXIO ALEX bundles

Severe acute corrosion of ACC tubes can totally paralyze a power plant

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