

CASE STUDY | CUSTOM-DESIGNED EXTERNAL TENSIONING

Valve Cover Assembly: Steam Turbine Control Valve

PROVIDING

- Improved gasket sealing
- Elimination of galling
- Reduced turnaround time



STEAM TURBINE STEAM VALVE COVER

SOLUTION

PROBLEM

1. Non-uniform load distribution using traditional torqueing methods of valve cover assembly

2. Improper gasket sealing

3. Routine valve servicing is time consuming

4. High risk of valve cover studs

1. Custom-designed four-leg tensioner bridge with external tensioners and 3" diameter x 17" long studs to replace hydraulic wrenching tooling

2. Studs incorporate internal tapered threads that mate directly to tapered tensioner puller screws to achieve elongation

3. Tensioners operating in tandem hydraulically stretch studs to achieve a residual 30,000 psi stud stress after relaxation

4. Tensioner bridge allows installation in a tightly nested hex cap nut pattern

5. Achievement of accurate preload quickly with uniform pressure distribution for proper sealing





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