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KOSO

excellence in action.

Here's how KOSO India is powering progress, one challenge at a time.

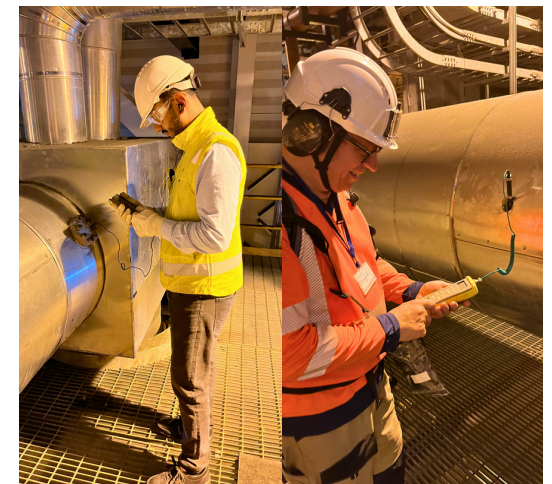
Behind every critical industrial operation lies a **precision-engineered solution**

kentintrol **PARCOL** KOSO HAMMEL DAHL **VECTOR** @paladon

Optimizing Ultra-Supercritical Power: Valve Efficiency Study in Morocco



KOSO's expert team conducted a comprehensive control valve assessment at Morocco's 2 x 693 MW ultra-supercritical coal-fired power plant (Units 1 & 2) in June 2023. The study focused on measuring efficiency losses through control valves and developing an advanced online monitoring system for critical valves. After extensive data collection and energy loss analysis, our findings revealed:



Unit	Equivalent MW-loss	Heat Rate Penalty, (kJ/kW-h)
Unit 1	0.5 MW-Eq.	6
Unit 2	8.9 MW-Eq.	96

In Unit 2, significant losses were identified in HP bypass steam PCVs, LP bypass steam PCVs, boiler feed pump recirculation valve, and Heater #9 Emergency Drain to condenser, with additional losses from the P-valve. Unit 1 showed minor leakage in the boiler feed pump recirculation valve B and LP bypass steam PRV A, requiring preventive maintenance to avoid potential capacity loss.

KOSO's solution: Implementation of a non-intrusive online monitoring system, ensuring continuous valve performance tracking without compromising pressure boundaries. This system enables proactive maintenance planning and significant energy savings through improved valve efficiency.

Benefits:

- Real-time valve performance monitoring
- Preventive maintenance scheduling
- Enhanced plant efficiency
- Reduced energy losses
- Non-intrusive monitoring solution

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**OUR
CREATIVITY
IS OUR PRIDE.**

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