

Improving boiler efficiency by 6.3% for a textile manufacturer using EverSense for Boiler Efficiency

 Rajasthan, India

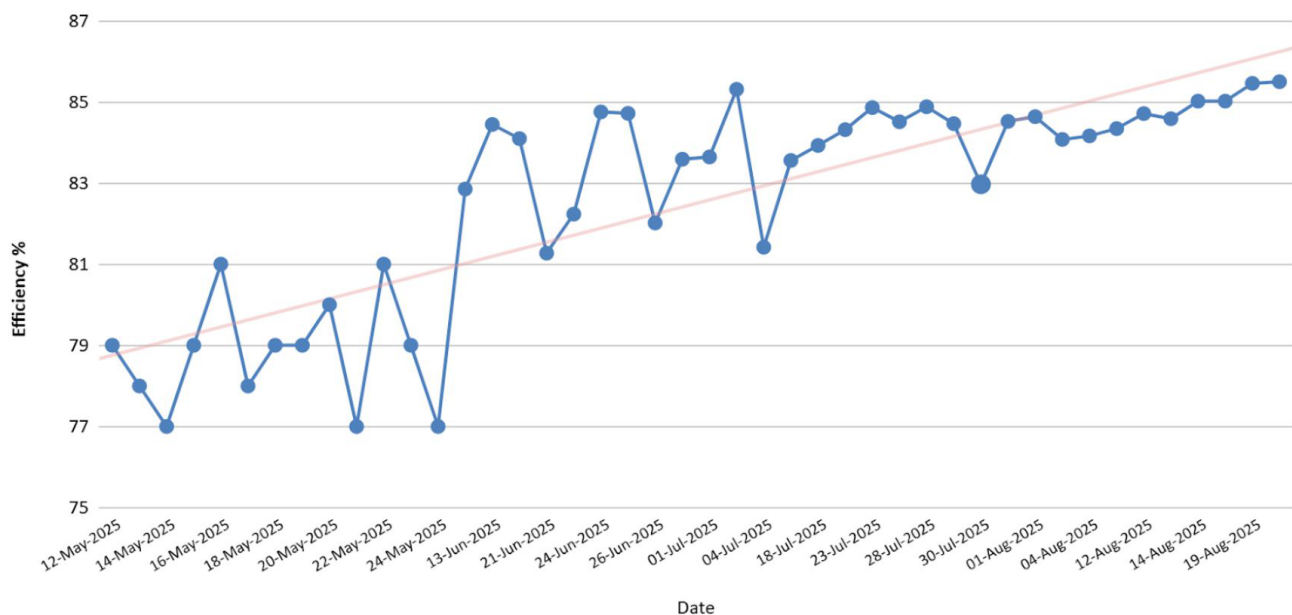
 Textile

Problem

A textile manufacturer in Rajasthan, India was experiencing variations in boiler efficiency which affected productivity. Boiler efficiency was 79% against the target of 84%, and the steam to fuel (S:F) ratio was 6.2 Kg/Kg (13.7 Pounds/Pounds) compared to the benchmark of 6.5 Kg/Kg (14.3 Pounds/Pounds). Blowdown Total Dissolved Solids (TDS) levels were high at 8,518 ppm, posing risks of scaling and corrosion. Additionally, the boiler ON/OFF cycle was at 1.3 cycles per hour, resulting in significant efficiency loss.

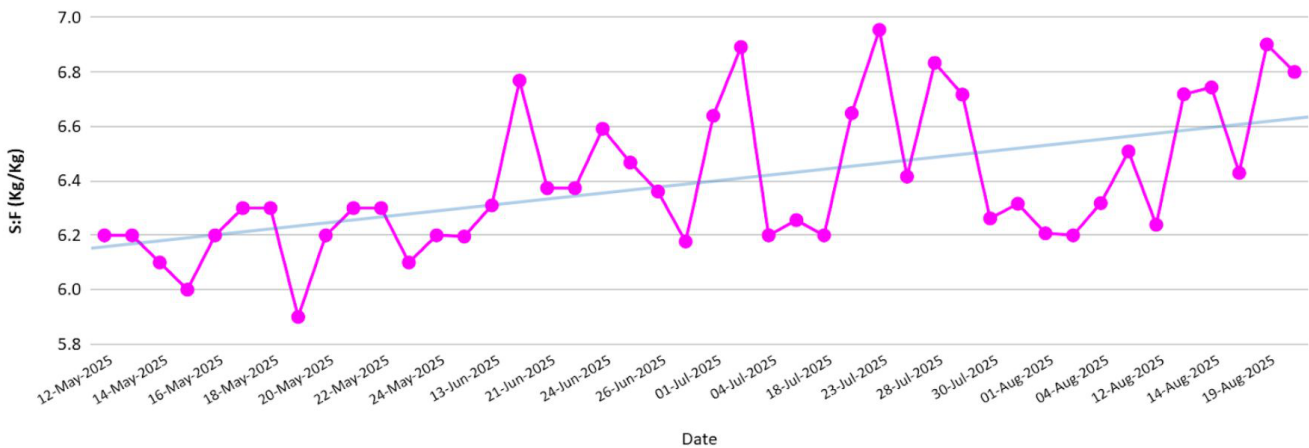
Solution

The textile manufacturer partnered with Forbes Marshall Digital in June 2025 to address these challenges using EverSense for Boiler Efficiency. The platform enabled real-time monitoring of boiler parameters including efficiency, S:F ratio, steam flow and pressure, O₂ levels, stack temperature, drum TDS, feedwater temperature, furnace pressure, and ON/OFF cycles. Continuous uptime monitoring identified key issues such as high fuel moisture and small particle size. Based on digital real-time data, corrective actions were suggested and implemented. This included cleaning and calibration of draft transmitters, servicing and optimisation of O₂ and TDS sensors, fine-tuning forced draft (FD) fan parameters with O₂ and CO monitoring, adjusting the fuel feeder minimum set point, and correction of draft pressure from -2.0 mmWC to -1.5 mmWC. On-site training provided on EffiMax cleaning and tuning also helped ensure sustained efficiency improvements.



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Improvement in boiler efficiency using EverSense for Boiler Efficiency, a Forbes Marshall Digital solution



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Improvement in steam to fuel ratio (S:F) using EverSense for Boiler Efficiency, a Forbes Marshall Digital solution

Benefits delivered			
Parameters	Before	After(11th Jun to 19th Aug)	Improvement
Boiler Efficiency	79%	84%	6.30%
Feedwater Temperature	55°C (131°F)	60°C (140°F)	9%
Stem to Fuel Ratio	6.2Kg/Kg (13.67 Pounds)	6.5Kg/Kg (14.33 Pounds)	5%

