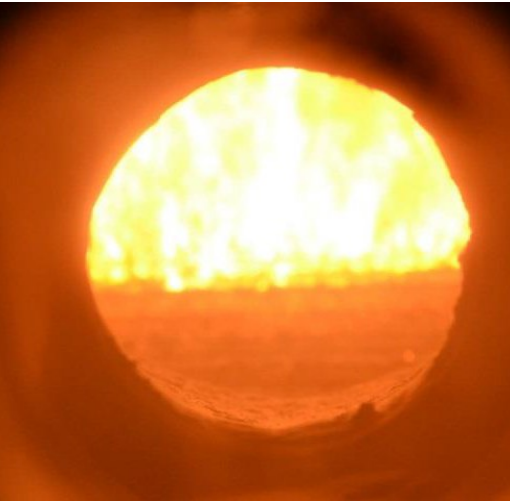


## Technical due diligence

# Boiler Optimisation Increases Efficiency



### Location

Malaysia



### Client

Malakoff (Independent Water & Power Producer – IWPP)



### Expertise

Thermal Efficiency, Energy Efficiency, Coal Combustion, Boiler Design, Plant Optimisation, Fuel Mgmt.

## Our Services



- Review of data (boiler combustion process)
- Review of designs (boiler combustion process)
- Risk assessment and identification
- Review and assessment of boiler design and modifications
- Review and assessment of fuels, fuel blends
- Impact assessment of fuels on boiler combustion process
- On-site visits and interviews/meetings regarding boiler operation, safety, performance, maintenance and modification
- Data gathering and verification to support post-visit assessments
- Technical due diligence report

## Project description

Superior power plant performance is only achieved by a motivated plant team that's well schooled in the fundamentals of power plant operations and maintenance. One of those fundamentals is optimizing combustion. A coal-fired unit's combustion efficiency, emissions performance, operability, load response, reliability and capacity are intimately related.

Our client, one of the leading IWPP companies in South-East Asia, recognised a decline in plant performance and combustion efficiency. To support the already overburdened O&M staff of our client, RWE was assigned to analyse the combustion problem and provide recommendation on how to optimize overall combustion efficiency and performance.

This included complete analysis of the boiler combustion processes and adjacent installations with a focus on the design and operational performance data. We could identify major causes in the boiler & fuel management, accountable for the reduced availability of the power plant. Since the combustion system modification were completed, our client has operated more reliably as well as more efficient.

Our expert thermal plant engineers are highly sought after by plant operators worldwide to act as independent technical advisors to help resolve any plant performance issues.

### Additional information

#### Fuel flexibility consequences

The cost of fuel is by far the largest variable cost of operating a power plant. The typical coal-fired plant strives for the lowest possible heat rate for a given fuel supply. To lower their overall fuel costs, some utilities have adopted a fuel supply strategy based on lower quality fuels. However, this may decrease fuel costs only if the plant is capable of reliably and economically burning the wide range of fuels available on the market. Unfortunately, the downside we often discover in our thermal support is that low-quality fuels increase boiler slagging and fouling, therefore, cause other serious operational and reliability problems. If a plant isn't carefully optimised to handle a wider range of fuel types, the resulting increase in O&M costs could level the lower costs for cheaper low-quality fuel very quickly.



## Middle East & APAC

