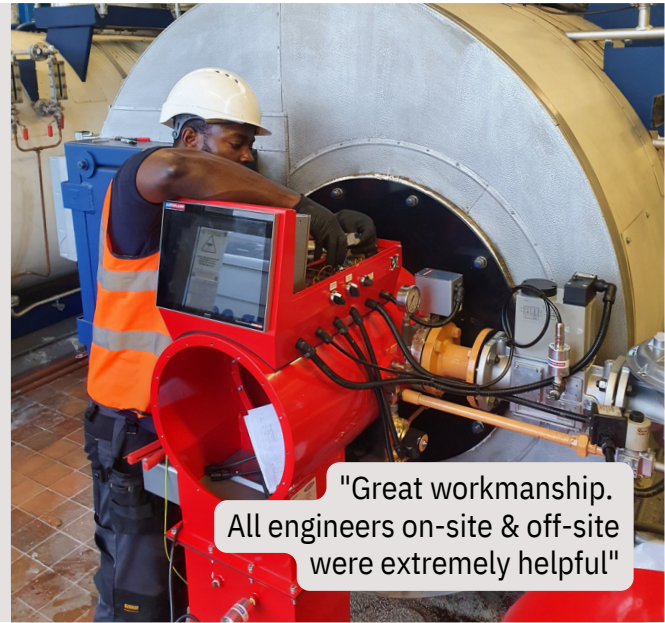


## RJAH Hospital West England

- Energy efficiency upgrade project.
- Autoflame Mk8 EGA EVO and Mk8 MM POD mounted controls on Limpsfield LCN025 burners with FGR pipework to facilitate...
  - » Low NOx
  - » A high turndown ratio
  - » Emissions monitoring



### THE PROBLEM

Our initial site survey identified the existing burners were outdated with a low turndown ratio and higher than average O2 values.



### THE GOALS

- Increase efficiency & reliability of the boiler plant
- Reduce fuel consumption and cost
- Reduce O2 & NOx levels
- Carbon Reduction
- To monitor and log emissions
- Ensure new burners operate with the lowest level of excess air to enable complete combustion



### THE STRATEGY

- The existing burners were upgraded to Limpsfield LCN025s to ensure a high turndown ratio (6:1) and to provide the most efficient combustion performance throughout the firing rate. 3% O2 is achieved from low fire to high fire, with zero CO.
- A complete Autoflame Mk8 combustion management system was installed to ensure a high combustion performance. This is safely maintained by constantly error checking fuel valve, air damper and FGR valve positioning, 50 times every second.
- To ensure this level of combustion performance is maintained 24/7/365, the Mk8 EGA Evo was installed. The EGA triggers small changes to the air damper.
- position to trim the performance and maintain commissioned values. This not only looks at O2, but also CO2 and CO, while monitoring and recording NOx levels.



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#### THE RESULTS

- **Emission Reductions:**  
Original emissions of between 5-9% O<sub>2</sub> were reduced to 3%.
- Reduced Maintenance
- **NO<sub>x</sub> Reductions:**  
MCPD Compliant
- Energy Savings



#### THE EQUIPMENT

##### Pre-Existing

3 x 3200 kg/hr. Robey Loos  
steam boilers

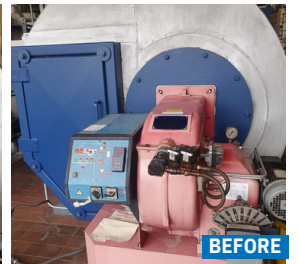
3 x Unigas burners

##### Newly Installed

3 x Limpsfield LCNO25 burner  
with FGR and POD mounted  
Autoflame Mk8 MMs

Autoflame Mk8 EGA EVO

Autoflame Mk8 DTI



BEFORE



AFTER