



Two University of Arts Sites Retrofit Burners

I am extremely happy with the installation from the first meeting up to completion. The product is excellent. The engineers were knowledgeable and flexible which helped deliver this project. I would highly recommend Autoflame.

- Senior Project Manager, Bouygues Energy Services

Autoflame upgraded the boiler rooms at two of University of Arts sites; London College of Communication and Chelsea College of Arts. Working in collaboration with Bouygues Energy Services, it was identified that the existing burners at both sites were not delivering efficient combustion performance. Significant energy savings could be delivered by reusing the existing boilers and replacing the pressure jet burners for a high efficiency version with integrated Autoflame air/fuel ratio controller.

The Chelsea College of Arts has one boiler serving the domestic hot water, and another two delivering heat for the building. The existing burners were mechanically controlled and also had limited turn-down. It was agreed that energy savings would be achieved with more sophisticated burner equipment using Autoflame micro modulation controls.

The boiler/burner equipment at the London College of Communication was much older, with the burner dating back to the 1976 and the boiler dating to 1964. The boiler was able to be reused, and the new burner is performing as projected on the 50+ year old boiler.

Autoflame recommended upgrading with the Limpsfield Burner, which is engineered to be a low excess air burner and offers a unique Performance Guarantee of 3% O₂ throughout the firing range.

Existing Equipment:

Five boilers, including:

- Viessman Boilers dating to the 1990's
- Lincoln boilers dating to 1961

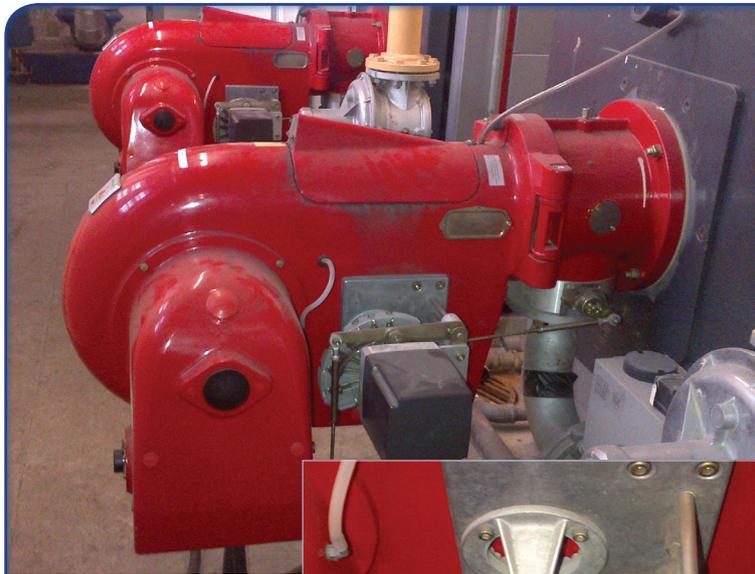
Solution:

Limpsfield Package Burners with integrated Autoflame Mini Mk7 Controllers

Benefits:

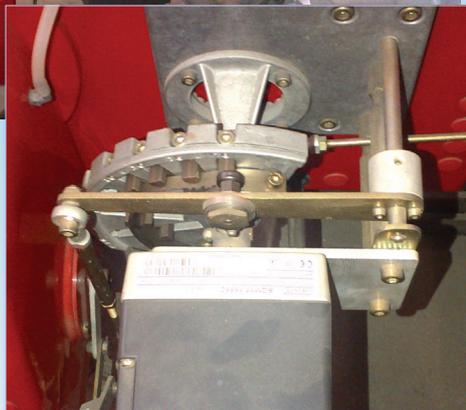
- Guaranteed 3% O₂ emissions (often less) with zero CO
- 10-12% fuel usage reduction
- Reduced maintenance costs
- Lower turndown ratio resulting in reduced cycling

Cost of systems recouped in fuel savings in 1-2 years



Above: Existing burner.

Right: Mechanical linkage.



Before:

- ◆ Mechanical linkage-based system
- ◆ Complex to maintain
- ◆ System is prone to degrading performance due to play in linkage over time (hysteresis)



Above: New Limsfield burner

After:

- ◆ Servomotor-based system
- ◆ Built-in controller simplifies installation/maintenance and reduces labour time
- ◆ System will operate to commissioned settings for years without adjustment

A total of 5 burners were installed across the sites within a very tight time frame that allowed only 4 weeks for manufacture and 2 weeks for installation and commissioning. The Autoflame project management team worked closely with the Project Manager from Bouygues to ensure the upgrade was delivered on time and that each boiler/burner was ready to use immediately.

A number of improvements have been delivered by the new equipment. Reliable operation has been recognised by site staffs who have also reported that they find the equipment easy to use and required minimal intervention. The project was completed this year, and Autoflame are working with University of Arts London and Bouygues to monitor the energy saving benefit. This was projected to be in the region of 10% and the payback period for the upgrade was between 1-2 years.



Autoflame operates worldwide with 60+ technology centres performing installation and support. Founded in 1972, Autoflame is a British manufacturer based near London. It ensures industry-leading quality control and innovation by performing in-house R&D, engineering, software development, manufacturing production, and technical support.

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