Leading Dairy Producer Enhances Combustion With Autoflame

Arla Foods is one of the UK's leading dairy companies, processing approximately two billion litres of milk a year and supplying a third of the nation's milk. Arla works closely with all the major retailers, and has a portfolio of some of the UK's leading dairy brands including Lurpak, Anchor, Cravendale and Lactofree.

Stourton Dairy is one of Arla Foods flagship production facilities. The project brief for this site was to improve efficiency by upgrading to the Autoflame Mk7 Controller and installing Mk7 Exhaust Gas Analysers (EGA) on each boiler to monitor and reduce exhaust gas emissions.

It is important for Arla Foods to maintain the efficiency of the company's manufacturing process and a solution was needed to reduce and monitor emissions from the boiler plant at Stourton. High levels of O_2 within a boiler can have a negative effect on the combustion process, cooling the burner flame and restricting heat transfer to the water. Reductions in O_2 levels will dramatically improve the combustion efficiency.

The Autoflame EGA system offers enhanced monitoring of flue gases produced during a combustion process. Six gases can be measured at any one time including O_2, CO_2, CO, NO and SO_2 or NO_2. The system is able to make minor adjustments to the combustion configuration when needed.

Unlike other trim systems, Autoflame's EGA carries out "3 parameter trim" and is used to maintain the commissioning values.

Existing Equipment:

Boilers in need of reducing and monitoring emissions

Solution:

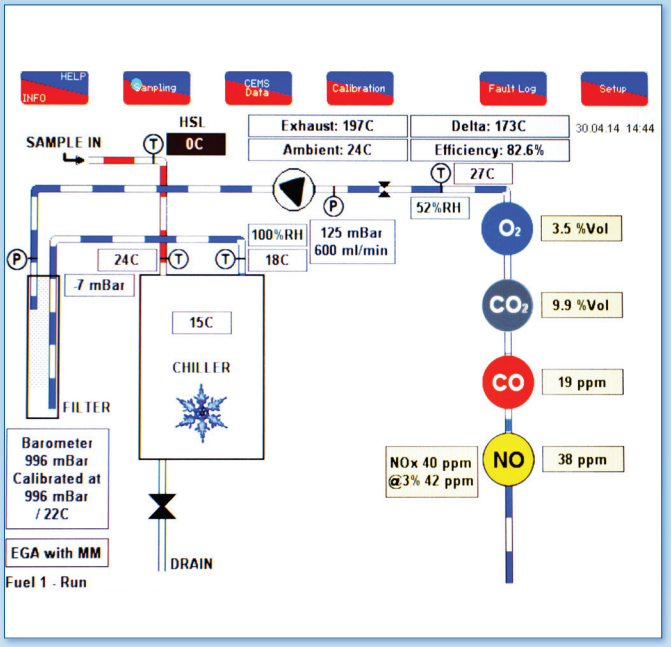
Autoflame Mk7 MM Controller and Autoflame Mk7 Exhaust Gas Analysers (EGA)

Benefits:

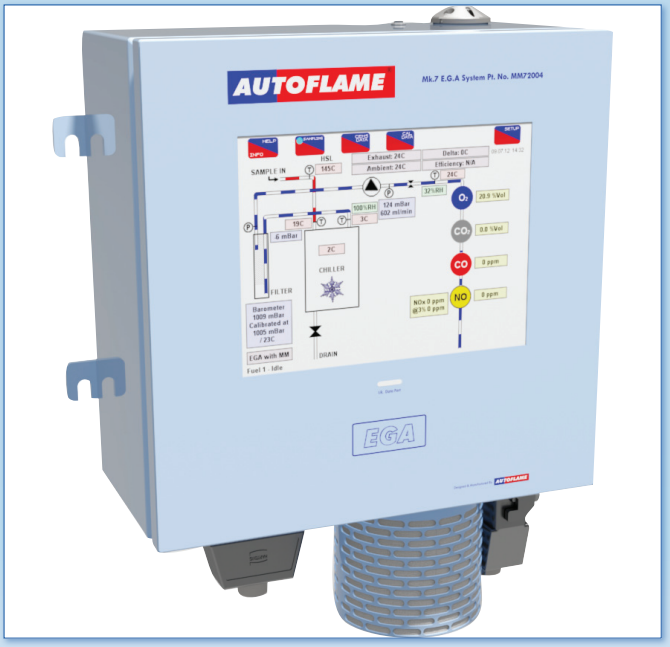
- Enhanced monitoring of various exhaust gasses
- Adjustments to combustion configuration for optimum performance
- Unique 3 parameter trim control to maintain commissioning values
- Data display for analysis
- Increased efficiency
- 2% Reduction in O2 levels

CASE STUDY

AUTOFLAME®



Emissions Monitoring System



Autoflame EGA

Trimming on O_2, CO and CO_2 values for extra safety, trim is used to ensure the boiler functions with acceptable levels of gas (specified at the time of commissioning).

The EGA will make adjustments when necessary in order to maintain optimum combustion and minimise environmental impact. It works together with the Mk7 Autoflame Combustion Management System to increase efficiency, reduce fuel consumption and improve combustion. Data can be displayed on the EGA touch screen for analysis in graph or chart form and can also be exported to the Building Management System (BMS) via the Autoflame Data Transfer Interface (DTI).

Since installation of the EGA at Stourton, Arla have seen improvements in efficiency and reductions of over 2 per cent in O2 levels and are now considering the installation of the DTI to take full advantage of the EGA's monitoring capabilities.

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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