

## Effect of Ferox Fuel Borne Catalyst on Open Flame Applications

Open flame applications include: utility, industrial, commercial and institutional steam generators, process systems, kilns and residential heating systems burning distillate or residual oil. The effects that Ferox has on the combustion process and byproducts of these fuels in open flame applications are summarized as follows:



### EFFECTS ON THE COMBUSTION PROCESS

The Ferox catalyst complex interacts with the heavier, long chain, combustion resistant elements of the fuel and existing deposits in such a way that upon being burned or exposed to high temperatures, these

elements are broken down and burned more easily. This "molecular atomization" of the fuel and destruction of surface deposits produces the following positive effects on the combustion process:

- Quicker, more complete combustion.**
- Better use of available oxygen.**
- Lower excess air requirements.**
- Increased flame and temperature control.**
- Removal of existing deposits**
- Better heat transfer.**
- Lower fuel consumption.**
- Increased overall efficiency.**

## **EFFECTS ON THE COMBUSTION BYPRODUCTS**

The effects on the combustion byproducts are a direct result of the changes in the combustion process. Ferox enhanced combustion produces the following positive effects on the byproducts of combustion:  
Inhibition of new deposit formation.

- Decreased particulate, smoke and soot formation.**
- Decreased NO<sub>x</sub>, SO<sub>x</sub>, CO and VOC emissions.**
- Increased ash capture potential of SO<sub>2</sub>.**
- Decreased carbon content in the ash.**
- Decreased fouling and corrosion due to decreased V<sub>2</sub>O<sub>5</sub> activity.**
- Decreased cold end corrosion due to decreased SO<sub>3</sub> formation.**

