

REDUXCO Power and Heat Plant:

REDUXCO catalyst can be used with different types of boilers. Pulverized fuel boilers, Stoke Fired boilers, Gas Boilers and Biomass boilers. It is suitable for the combustion of coal, lignite, liquid and gaseous fuels.

REDUXCO is added to the air (coal, lignite, biomass, gas, petcoke) that goes into the combustion chamber or directly to liquid fuel (oil, diesel, heavy oil, petroleum)



Benefits:

- Increased efficiency of the combustion process:
- Reduction of fuel consumption
 - Pulverised fuel boilers: 2-6% (power)
 - Stoke fired boilers: 4-10 % (heating)
 - Oil boilers: 6-12%
- Reduction of harmful gas emissions NO_x, CO, SO_x
- Reduction of exhaust gas temperature
- Clean internal surface
- Longer intervals between maintenance shutdowns

REDUXCO catalyst acts at different levels in the heart of the combustion reaction and possesses high thermal stability (1260°C). It's critical decomposition temperature is 1360°C.

Added Benefits

- Allows the thermolysis of water at a lower temperature (around 800°C) and thereby enriching the reaction mixture in combustion.
- Helps break the carbon chains (oil component) with less energy, therefor making the combustion process easier and more complete
- Energy produced by the combustion process is conveyed by both Infrared and ultraviolet energy

All the elements mentioned above, including many others, improve the overall efficiency of the combustion process and allows you to save fuel consumption and decrease emissions. In addition, as the combustion is more complete, it generates less waste, resulting in less soot, ash, unburned elements and dust. Maintenance shutdowns and cleaning are further apart which further improves the performance of the facility.



Pulverized Boiler:

- Increased efficiency : 2-6 %
- Maintains internal surface of the boiler in good condition
- Complete combustion: CO less than 10ppm
- Exhaust gas temperature reduced
- Reduction of harmful gas emissions:
 - NOx - up to 33% Reduction
 - SOx - up to 15% Reduction
 - CO₂ - up to 10% Reduction



Stoker Fired Boilers:

- Increased efficiency : **4-10%**
- Maintain internal surface of the boiler with good conditions
- Reduction of emissions

Criteria: 25t vapor / h

Gas Boilers

Increased efficiency up to **3%**

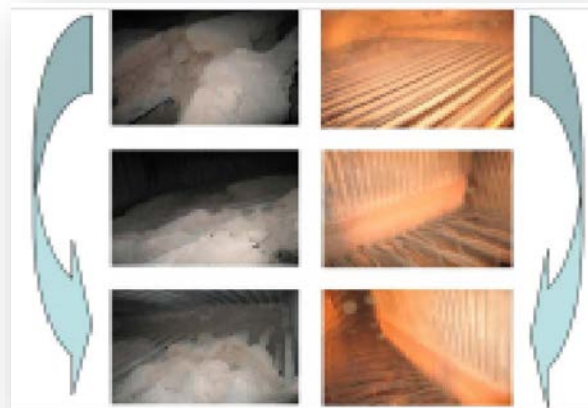


FIGURE 1: OP-230 Boiler without Reduxco to the left compared to boiler surface after 30 days with Reduxco to the right

Dosage

Amount of supplied product is:

30 - 40 ml per 1000 kg of hard coal - supplied to primary or secondary air

20 - 40 ml per 1000 kg of brown coal - supplied to primary or secondary air

10 - 40 ml per 1000 m³ of natural gas

* (For Power Plant, dosage usually is from 100-200 ml of REDUXCO per 1 ton of burnt coal or oil.)

Testing:

Tests have been carried out on the following types of Pulverized and Stoker boilers:

BP-1150; OP-380; OP-130, OR-32, OR-16, WR-25, WR-15, WR-10, WR-5, BKZ-160, BKZ-210

OP-115, Szychau-Elbing 75t/h, EKM-50

Fuel:

Hard coal, brown coal (Lignite), gas, heavy and light oils, biomass