

Usage Testing Conducted on Powdered Combustion Catalyst Formula in Power Station



“Test resulted in cleaner running plant along with increase in efficiency”
– Phil Hastings, Chief Technical Officer of Eco Global Solutions

OVERVIEW

- A power station in Houston, Texas tests EGS CATALYST Hydrocarbon Combustion Catalyst in coal furnaces

CHALLENGE

- Maximize combustion efficiency.
- Accomplish a cleaner running plant by reducing emissions.

EGS SOLUTION

- Administer EGS CATALYST to coal furnace and monitor results and progress of test.

RESULTS

- Reducing excess air from 26% to 10% in low swirl or coarser sized coal flame injected with EGS CATALYST powder resulted in a net reduction of NOx by 25% while maintaining combustion efficiency at the 98% range.
- BTU increased from 11,100 per pound to 12,770 per pound.
- Carbon decreased from 70.4 to 67.0
- Oxygen decreased from 25.6 to 9.2

CONCLUSION

- The test proved to be successful as both an increase in combustion efficiency and a decrease in environmentally harmful emissions was accomplished.

A power station in Houston, Texas was selected to be the test subject for the EGS CATALYST Hydrocarbon Combustion Catalyst powdered formula. Eco Global Solutions engineered a powdered formula for ease of use, storage as well as maximum efficiency with regards to the burn rate. These are all qualities that would be beneficial to any Power Station burning coal to produce energy.

Using 334 gram bags, each treated 1 metric ton of coal.

Carbon efficiency was raised from 99.88% from 97.26%. Carbon efficiency was improved by promoting the burning of carbonaceous ash as the carbon content in the ash was reduced by 74% in tests.

| | Without CATALYST | With CATALYST |
|-------------------|------------------|---------------|
| Carbon efficiency | 97.26% | 99.88% |
| Excess air | 26% | 10% |
| BTU | 11,100/lb | 12,770/lb |
| Carbon | 70.4 | 67.0 |
| Oxygen | 25.6 | 9.2 |

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