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Performance Test To measure effectiveness of CMC SC (Combustion improvement & Antifouling)

ALTRET CMC SC is This highly advanced fuel additive has many desirable qualities such as **CATALYTIC EFFECT** for improved combustion, **ANTI-FOULING & ANTI-CLINKERING** property for better heat exchange and dual effect, oxidation & reduction catalyst for lowering the emission levels.

Before Establishment of regular application investigation on the qualitative and quantitative aspect of "CMC" 95 2KSR Combustion Monitoring Chemical is generally implemented. This investigation trial period may be for five days to 20 days depends on boiler size and boiler specifications. ALTRET project handling team perform the trial in association with customer's technical team. During the investigation trail boiler efficiency and other performance evolution test carried such as direct measurement of fuel consumption, fuel analysis, and steam and feed water flow rates along with their pressure and temperature levels. Fortunately most of the essential measurements as regards to flow rates, Temperatures, pressure along with daily performance operating parameters etc. will be noted. The fly ash samples from ESP will be collected at regular Shift wise and the daily composite sample were prepared for analysis for fuel loss of ignition. These analyses along with other relevant parameters will be used to compute boiler performance parameters.

ALTRET offers Chemical / product sample to customer to carry out laboratory based performance test to ensure performance of product before approving field trial.

Laboratory Test to evaluate effectiveness of Product prior to field trial

To measure the effectiveness of product Performance evalution test can be be carry out at in house laboratory at client end.

1. **LOI test (According to ASTM Standard)**

   LOI test with recommended dosage (40-100 ppm) of product on existing fuel can be evaluated with blank reading.

   The difference of LOI of existing fuel and LOI of existing fuel with dosage of ALTRET product can be measure.

   High LOI of fuel with ALTRET product ensure the effectiveness of the product.

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2. **Measuring Angle Of Repose**

   Angle of repose of ash can be measure of above both samples of ash (After burning of fuel in muffle furnace)

   Reduction in Angle of repose indicates ash is most porous and tend to detached from surface.

3. **Measuring Ash Density**

   Ash density can be measure of above both samples of ash After burning of fuel in muffle furnace (i.e. 1. Ash of Direct burnt Fuel and ash of burnt fuel with ALTRET product/)

   Increase in Ash density indicates ash is heavier which may tend to fall dawn

4. **Measuring Ash Conductivity**

   Ash conductivity can be measure of above both samples of ash After burning of fuel in muffle furnace (i.e. 1. Ash of Direct burnt Fuel and ash of burnt fuel with ALTRET product/)

   Increase in Ash conductivity indicates ash is conductive which may easily collectable at ESP of boiler.

Conclusion:-

Before applying or conducting boiler trial one can ensure result performance of ALTRET combustion monitoring chemicals at laboratory scale. Laboratory based performance evaluation test are very easy, less time consuming and can be perform at ordinary laboratory without any sophisticated devices.

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