

ACE: Advanced Combustion Engineering Boiler Fireside Diagnostics & Solutions

ACE, Advanced Combustion Engineering, is a program offered by GE Infrastructure Water & Process Technologies that monitors the fireside performance for coal burning power generation facilities. The primary focus of the ACE program is to quantify the performance of fireside treatment solutions (FuelSolv* products) addressing slagging and fouling thereby allowing power plants to reduce the costs related to derates and forced outages. ACE provides the following data for improved decision making:

- Boiler radiant and convective section fouling and slagging measurements
- Heat rate calculations and efficiency
- Air preheater fouling detection and prediction
- Emissions reporting
- Alarm setting highlighting troubled areas

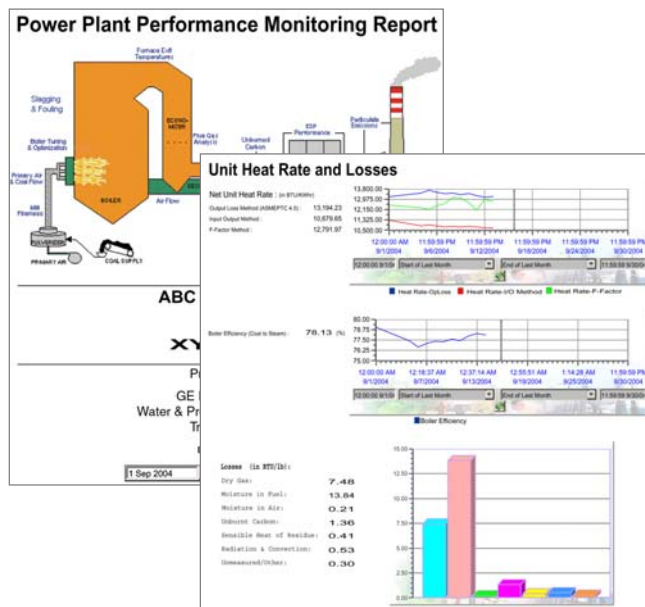
ACE Leads to Fireside Solutions

Data logging and analysis with ACE identifies inefficiencies within a power plant leading to the following fireside chemical treatment solutions:

- FuelSolv FS3954, a heat activated silicate blend, for convective pass fouling
- FuelSolv FMG2960, a magnesium oxide blend, for radiant slagging
- FuelSolv FS8210 and FuelSolv FS4995, chemical blends providing resistivity modification and agglomeration for particulate matter reduction

Benefits of Using ACE

Historically, there has been a void in the ability to quantify the actual performance improvement associated with fireside treatment. ACE fills this void changing fireside treatment from an art into a science.



Using Six Sigma techniques, the ACE program uses plant data to optimize the treatment program. Key parameters that are monitored include superheater and reheater temperatures, steam flow rate, feed-water flows, plant heat rate and boiler efficiency. Potential benefits to power plant operations include:

- Reduction of derates due to fouling or slagging
- Reduction of forced outages due to slagging or fouling
- Reduced fuel costs due to operation at the optimal heat rate
- Potential ability to burn lower cost fuels which pose fouling/slagging challenges

On-site support for ACE is provided by GE global field sales engineers. For more information on ACE and a sample ACE report, contact your local GE representative.



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