Energy Manager's & Auditor's Asset

See-ThermiSave 2.3

Welcome to See-ThermiSave (Save thermal energy in Boilers, Furnaces, Thermic Fluid Heaters, Driers, Distillation Columns, Evaporators, and Incinerators, maintain history card and monitor energy consumption versus production in energy and cost terms)

Globalization has opened diverse opportunities. It is training Indian Industry to come out of conservatism and become really competitive. Inputs are being evaluated more objectively. Better energy-usage efficiency is one of those rare activities where national and industrial interests converge. First step towards energy conservation is "Know thyself".

Know Thyself

Energy consuming equipments are assets of the company. Data about design values (while buying) and operating values (as dictated by process) needs to be documented. This leads to specification sheet, history card and consumption trends.

Balancing Act

First law of Thermodynamics tells us that energy can not be created nor destroyed. Technical person can take solace from this but economic reality is different. We need to draw heat balance around all energy consuming equipments. Quantification of inputs, outputs and losses may reveal not only technical faults but also exposes communication inefficiencies and orthodoxy.

Basket

Loss points once identified can be plugged by systematic efforts. "See-ThermiSave" helps you in this regard by identification & quantification of energy conservation opportunities, tips and case studies. It also details list of specialist vendors, which make search more precise.

Bouquet

Monitoring the progress of energy conservation measures, their evaluation at the implementation point and reflection in the energy bill is essential activity. Sometimes it is easy to achieve success, maintaining it requires teamwork and consistency.

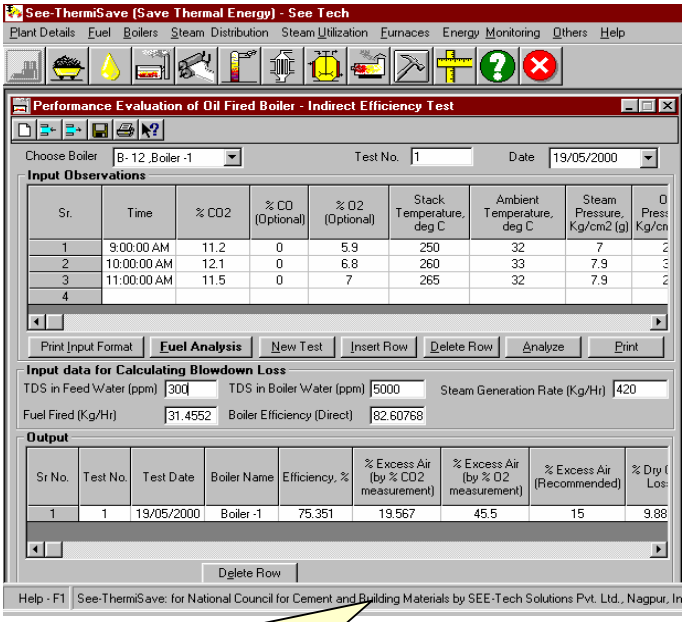
Features of See-ThermiSave

1. Boilers

1. Fuel receipt, storage accounting and preheating / preconditioning
2. Boiler specification
3. Observation table for boiler efficiency tests
4. Direct efficiency test calculation
5. Indirect efficiency test calculation
6. Savings due to reduction in Dry gas loss
7. Savings due to reduction in Ash loss
8. Idling losses due to oversized boilers
9. Derating of boilers
10. Savings due to reduction in Stack Gas temp.
11. Waste-heat recovery

2. Furnaces

1. Furnace specification and Types
2. Dry gas loss
3. Feed screw / loading improvement
4. Waste heat recovery
5. Reduction in furnace volume
6. Selection of insulation
7. Product heat recovery
8. Batch ~ continuous furnace
9. Moisture reduction in Feed



Performance Evaluation of Oil Fired Boiler by Indirect Method

3. Steam / Thermic Fluid distribution in the plant

1. Format for detailing bare and insulated pipes
2. Calculation of heat load
3. Saving calculation due to insulation of bare pipes and flanges
4. Steam trap selection guide

4. Driers

1. Specification of driers
2. Determination of efficiency of driers
3. Energy Conservation Opportunities

5. Distillation Column

1. Re-boiler details
2. Condenser details
3. Column details
4. Reflux justification (Internal / External)
5. Calculation of Column Efficiency
6. Minimum Energy Requirement

6. Condensate Handling

1. Measurement of condensate, precautions
2. Flash steam - estimation
3. Heat Recovery from Condensate

7. Evaporators

1. Evaporator details
2. Determination of evaporation efficiency
3. Concept of multiple effect evaporation
4. Thermo compression and mechanical vapor compression
5. Salting out evaporators

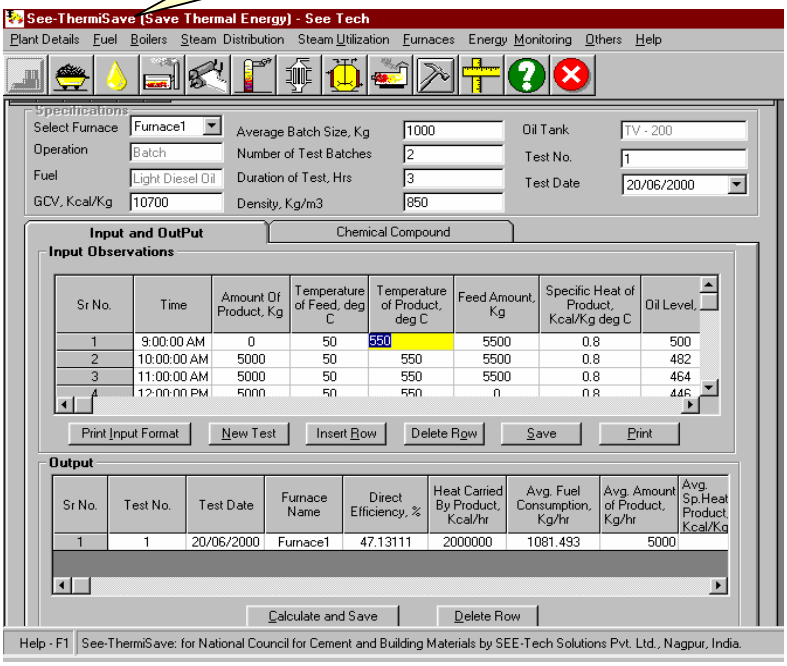
8. Reactors

1. Reactor details
2. Performance Evaluation

9. Thermic Fluid Heaters

1. Thermic Fluid Heater details
2. Performance Evaluation

Furnace with Chemical Reaction: Direct Efficiency Test



10. Energy Monitoring

1. Thermal requirement for distribution
2. Thermal requirement for each product
3. Budgeted thermal consumption ~ Actual consumption
4. Correction of thermal requirement after energy conservation activity is completed

Use Coal, Oil, Gas & Steam Efficiently with See-ThermiSave 2.3

SEE-Tech Solutions Pvt. Ltd.

(Consultants & Solution providers for Industrial Safety, Energy Conservation, Environment Protection & Application Software)

LetsConserve, 11/5, MIDC Infotech Park, Near VRCE Telephone Exchange, South Ambazari Road, NAGPUR - 440 022, (INDIA)
Hello: +91-712-2222177, Fax: +91-712-2225293, E-Mail: seemil_ngp@sancharnet.in

Visit us at www.letsconserve.org : a site dedicated to **Conservation of Energy & Environment**