



Thermo Scientific COBOS

Coal Blending Optimization System

The Thermo Scientific COBOS (Coal Blending Optimization System) is optimization software that blends up to six coal sources to meet quality specifications at the lowest cost. This software system allows you to minimize the use of higher cost or scarce coal resources and reduce the variability of the quality in your blends. The COBOS™ is designed to improve your bottom line.

The COBOS system allows any number of coal sources to be defined by composition and value. The operator can select up to six of the defined sources to blend. The software system will then blend the sources to meet a “recipe” consisting of up to five quality parameters, such as ash, sulfur, moisture, or even ash oxides or ratios of ash oxides. Any number of blend recipes can be predefined for different quality targets and priorities, which allows the operator to easily select the correct recipe for the batch being blended.

The COBOS has an automated graphics interface that plots the control parameters specified by the current recipe. Information on current analysis, product name, and percent of load completed are shown on the same page.

The COBOS also automates the weight averaging of the MAF calorific value, bound moisture, and other ash constituents of all coal sources being blended. This feature is in operation even when the system is in manual blend mode, which eliminates the need for the operator to update these values in Base Coal when coals are being blended from different sources.

The software system allows the operator to specify critical feeder information, including the delay time from each feeder to the analyzer, the maximum and minimum capacity of the feeders, and how rapidly the feeder output is allowed to change.

The COBOS is able to compensate for errors in quality assumptions and reported weights from each source during blending operations. The ability of the software system to handle changing source quality conditions makes it an excellent tool for controlling the blending of coal to improve your bottom line.



The main COBOS screen displays all the key inputs to and outputs from the system, along with trend lines on actual coal quality for each of the control parameters.

COBOS — Coal Blending Optimization System

General Specifications

Sources	Up to six sources of blend coal
Control Parameters	Up to five blend control parameters
Software Required	Thermo Scientific Base Coal software
Input Signals from Control System	Thermo Scientific COBOS mode selection; Percentage of feed from each source

Inputs from Operator

Source Name Sources Definition (required)	Moisture (%), Ash (%), Sulfur (%), Cost, Other non-PGNAA ash constituents (%), Moisture and ash free heating value, Bound moisture (%)
Source Name Sources Definition (optional)	Ash oxide data (% of ash)

Recipe Information

Recipe Name Selection of quality parameters	Maximum control point, Minimum control point, and Priority
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Feeder Information

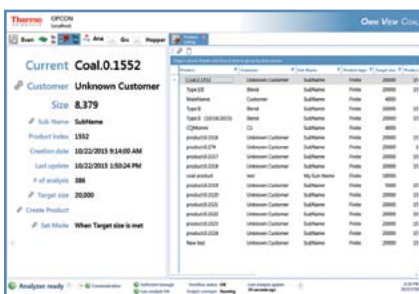
Coal flow time from the source to the analyzer
Maximum feeder capacity
Minimum feeder capacity
Maximum feeder rate of change per minute

Output Data from COBOS

The recommended percentage of the total coal flow needed from each active source to make the blend

Data Transfer

The software system receives data from and sends data to the user's PLC or control system via an OPC client/server link



System setup is conveniently accomplished with user-friendly pop-up windows.

Find out more at thermofisher.com/coal