

FTS Technologies: ENERGY MONITOR

Energy Monitor

FTS Technologies "Energy Monitor" is a tool specifically designed to provide users of flame treatment and/or flame deflashing technology a tool that enables the optimal setup of air/gas ratios.

Flame conditions that are not measurable provide inaccuracies in the combustion reaction, providing a flame that is either too rich (too much gas) or too lean (too little gas). Flow meters, with their own level of inaccuracy, and the constantly variable quality of gas and air supplies, makes optimization based solely on flow meters very unreliable. Fortunately, the use of an FTS Technologies 'Energy Monitor', either integrated into the combustion unit, or as a separate plug in calibration tool, ensures that these inaccuracies are eliminated.

Negative Aspects: Gas Rich Flame

- Using more gas than is needed for a successful process resulting in higher gas consumption and higher running cost.
- Possible generation of carbon monoxide because there is inadequate air for the complete combustion of the gas.

Negative Aspects: Gas Lean Flame

- Using too little gas for the combustion reaction makes the flame weak and ineffective in adequately treating the surface of the material
- May result in an increase in the number of burner faults
- Using too little gas can also be viewed as using too much air, resulting in a higher consumption of compressed air than necessary. The cost of compressed air is very similar to the cost of gas.

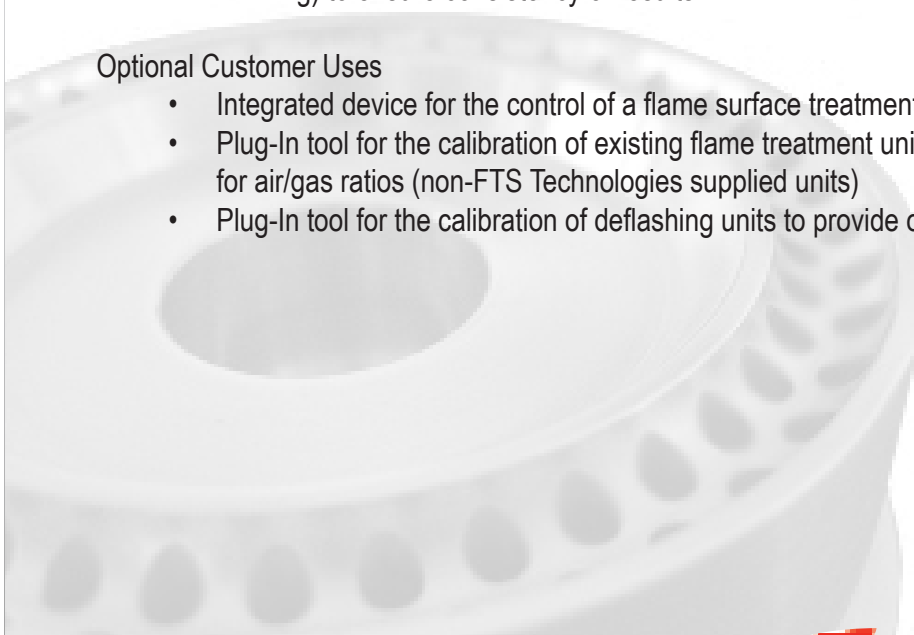
The goal of the Energy Monitor is to provide a tool that can be used to correctly balance the air/gas ratio for the most efficient flame process. A flame process that:

1. Does not result in excessive and wasted costs
2. Provides the means to accurately control the flame process (flame treatment or deflashing) to ensure consistency of results.

Optional Customer Uses

- Integrated device for the control of a flame surface treatment unit.
- Plug-In tool for the calibration of existing flame treatment units that only have flow meter control for air/gas ratios (non-FTS Technologies supplied units)
- Plug-In tool for the calibration of deflashing units to provide optimal flame efficiency.

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fts Technologies

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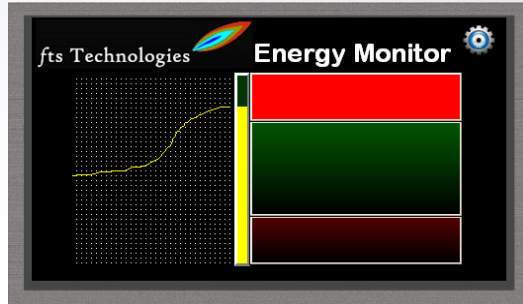
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Energy Monitor Screen Shot: TOO MUCH GAS

In this example the 'Energy Monitor' is detecting that too much gas is in the air/gas stream in relation to the volume of air, making for a inefficient and ineffective flame. Adjustments are required

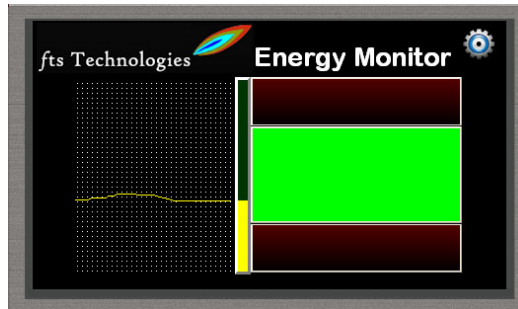
Result = RED INDICATION BAND ILLUMINATED



Energy Monitor Screen Shot: OPTIMIZED AIR/GAS RATIO

In this example the 'Energy Monitor' is detecting that the air/gas ratio is within an acceptable efficiency rating and that no adjustments are required.

Result = GREEN INDICATION BAND ILLUMINATED



Energy Monitor Screen Shot: TOO MUCH AIR

In this example the 'Energy Monitor' is detecting that too much air is in the air/gas stream, making for an inefficient and ineffective flame. Adjustments are required

Result = RED INDICATION BAND ILLUMINATED

