



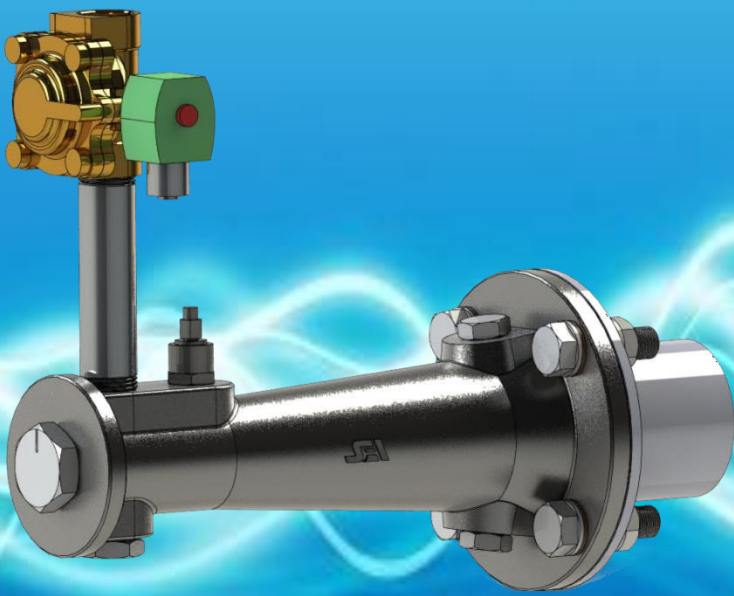
American Fuel & Petrochemical Manufacturers

Wednesday October 6th, 2021

2:45 to 3:30 PM CST

Acoustic Pyrometer Boilerwatch®

Furnace Gas Temperature Measurement



Comparison

Acoustic Pyrometer vs. IR Camera

Master Distributor
Greenbank Energy Solutions Inc
185 Plumpton ave
Washington Pa 15301
724-413-4021



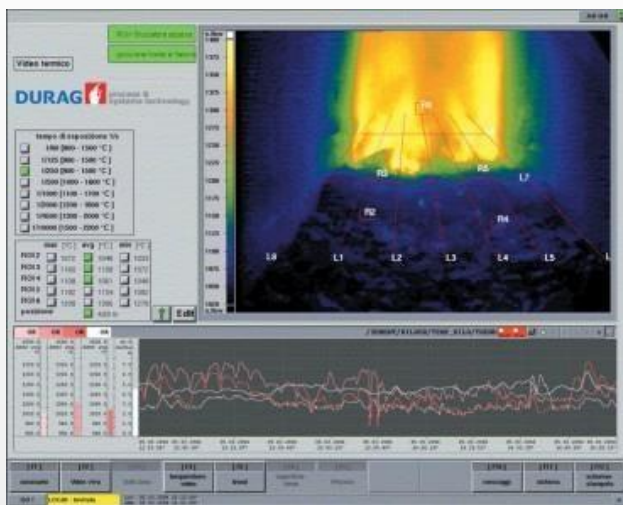
Comparison

IR CAMERA

ACOUSTIC PYROMETER

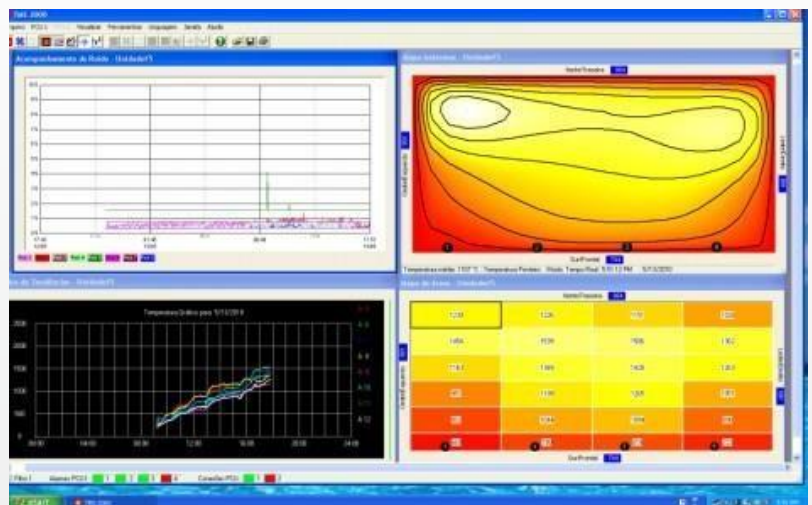
FIELD OF VIEW	PAL, picture element: 752(H) x 582(V), fixed focus	2 Dimensional section Boiler
TEMPERATURE RANGE	Thermography overall radiation 1000°C - 2000°C	Combustion Gas Temperature 0°C to 1927 °C
TEMPERATURE DATA	Up to 5 points defined by the Operator	24 configurable areas by the Operator
DATA OUTPUT	Rs232 / Rs422 / Rs485; ASCII, Siemens Rk512; Ethernet / TCP/IP	Rs232 / Rs422 / Rs485; OPC
SPACE REQUIRED FOR INSTALLATION	1450 x 500 x 800 mm (HxWxD)	304 x 200 x 500 mm (HxWxD)
SENSORS REQUIREMENTS	Instrumentation Air: 5-8 bar Air Temperature: < 40°C Solids: < 1 µm Oil: < 0,1 mg/ m3 Water (dew point) < -10°C clean, chemically non-corrosive, Hardness: <5°dH / <28 mMol/l 350 Liters/h	Service Air: 5-8 bar Non constant consumption
TEMPERATURE TREND	Up to 4 (1 flame temperature and 3 zones)	Up to 8 areas (Selectable)
USER INTERFACE	Predefined for the Software	Selectable by the User. Availability of close Up and modification Software windows
INFORMATION DISPLAY ON SCREEN	Video Image, Temperature Trend and Alarms	Isothermal Map, Area Map, Temperature Trend Noise/Leak Detection, Statistics, Path Temperature, Alarms, Walls Mean Temperature.
STORAGE DATA	Temperature trend.	Isothermal Map, Area Map, Temperature Trend Noise/Leak Detection, Statistics, Path Temperature,

Flame Sight SOFTWARE



Surface Measurement

TMS-2000 SOFTWARE ACOUSTIC PYROMETER



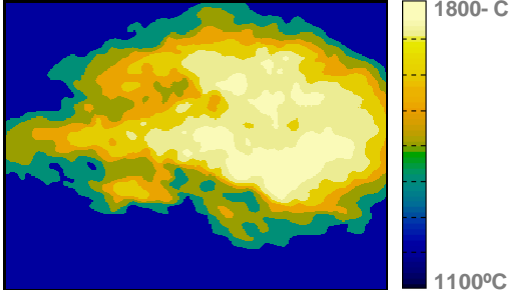
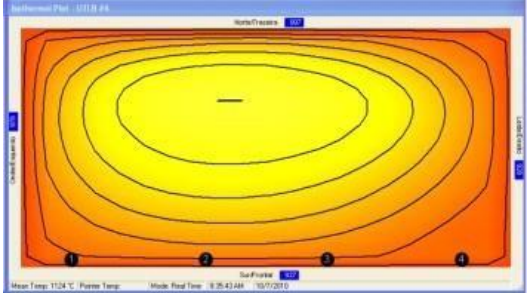
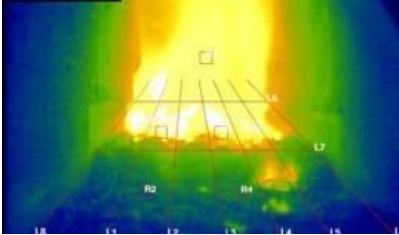



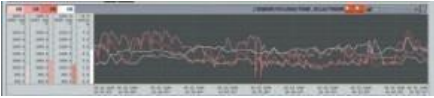
Gases Measurement

Master Distributor
Greenbank Energy Solutions Inc
185 Plumpton ave
Washington Pa 15301
724-413-4021

Comparison

IR CAMERA

ACOUSTIC PYROMETER

<p>TEMPERATURE RANGE</p>	<p>Thermography overall radiation 1000°C - 2000°C</p> 	<p>Isothermal Map - Combustion Gas Temperature 0°C to 1927 °C</p> 
<p>TEMPERATURE DATA</p>	<p>Up to 5 points defined by the Operator</p> 	<p>24 configurable areas by the Operator</p> 
<p>SPACE REQUIRED FOR INSTALLATION</p>	<p>1450 x 500 x 800 mm (HxWxD)</p> 	<p>304 x 200 x 500 mm (HxWxD)</p> 
<p>TEMPERATURE TREND</p>	<p>Up to 4 (1 flame temperature and 3 zones)</p> 	<p>Up to 8 areas (Selectable)</p> 