



ABSR ENGINEERS & SERVICES PVT. LTD.

**Your PARTNERS for
INNOVATIVE
ENGINEERING
SOLUTIONS**



EMPOWERING PEOPLE

TESI SPA Italy - High Energy Ignition System



Relying on over 30 years of expertise, Tesi designs and manufactures best in class ignition systems for gas, oil, coal and multi-fuel burners, supplying major petrochemical, chemical and energy players at a worldwide level with state of the art devices.

- HIGH ENERGY IGNITION SYSTEMS
- SOLID STATE IGNITERS FOR HEAVY DUTY TILTING BURNERS
- HIGH VOLTAGE IGNITION DEVICES
- PILOT BURNERS
- PORTABLE IGNITERS
- ACCESSORIES AND CONNECTION CABLES



TESI SPA Italy - High Energy Portable Igniters



High Energy **RETRACTABLE IGNITION SYSTEMS** for tilting burners are designed to ignite diesel and heavy fuel oil directly. They are provided with a retraction system protecting tips from dirt and flames once sparking is finished and a flexible rod to follow the main burners' angle. They present electrical requirements so to deliver energy up to 24 Joules, needed to light the HFO directly. HE Ignition systems can replace traditional air/gas pilot torches, providing the most reliable and cost-effective fuel ignition whether gas, light oil, diesel or heavy oil is used.

Tesi **PORTABLE IGNITION DEVICES** are designed to ignite burners without an individual pilot torch or electrode assembly. They are the best back up solution to solve existing igniters failures or in case of emergency. Thanks to a solid design and low voltage input, the operator can handle the rod easily during maintenance, without any risk of breaking the insulators and avoiding dangerous electric shocks.



Tesi®
S.P.A.

www.tesigroup.com

BFI AUTOMATION Germany - Flame Monitoring & Evaluation System

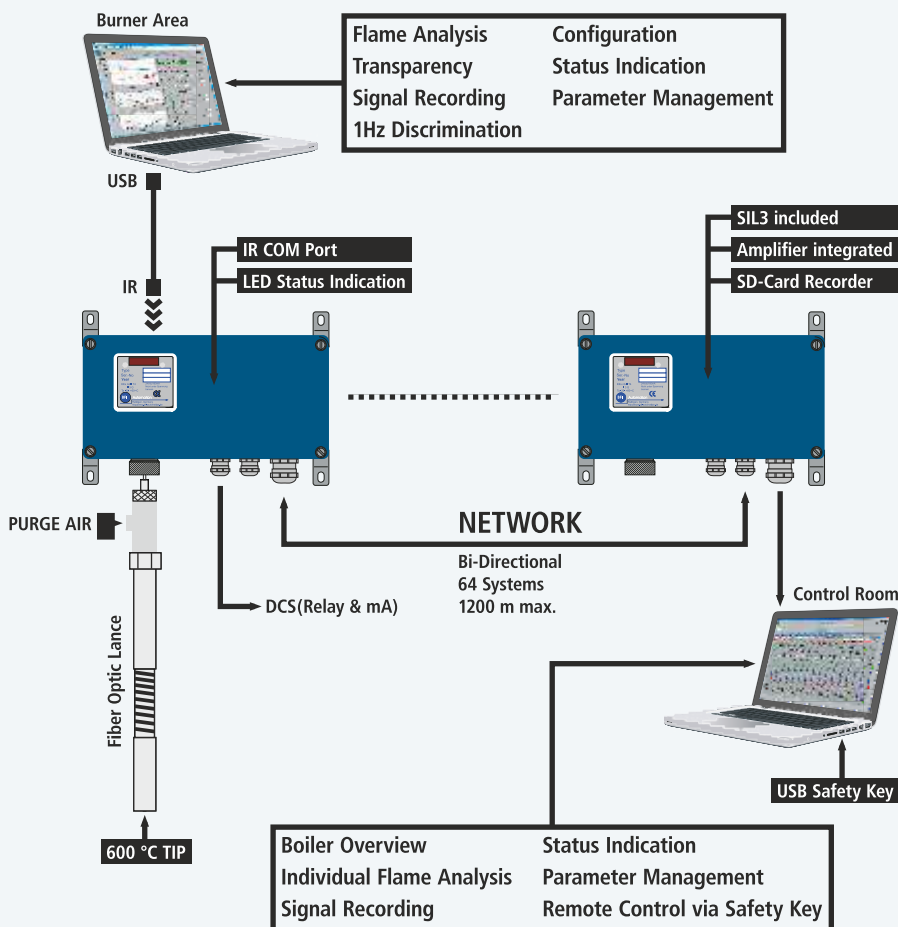


TUV-approved flame monitoring and evaluation systems lead our wide range of outstanding products. Applications include :

- Oil Fired burners
- Coal fired burners
- Gas fired burners
- H₂S & BFG burners
- Any combination of above fuel application



THE NEW GENERATION OF FLAME MONITORING



- High Temperature application
- Fiber optic technology
- Hazardous area application
- SIL3 requirements



Flamonitec
BFI AUTOMATION

www.flamonitec-bfi.com

VISION TIR Spain - Multispectral Thermography System

ProTIR

Infrared Thermal Imaging System for Continuous Temperature Monitoring

Based on high resolution thermal cameras and a specific software, **ProTIR** provides real radiometric images that accurately measure temperature inside of furnaces, rotary kilns, coolers, incinerators and boilers in the steel, minerals, power generation and process industries in addition, **ProTIR** is also ideal for glass melt furnaces, steam reformer and cracker tube furnaces, enabling process control optimization, energy efficiency savings and prolonging the lifetime of the furnaces and reformer tubes.



Benefits

- High-definition thermal images
- Radiometric images with accurate temperature information
- Flame shape optimization
- Process control optimization
- Energy efficiency savings
- Long term reliability
- Minimal maintenance
- 2 years warranty
- Automated alarm outputs
- OPC connection



ProTIR temperature monitoring in Power Plant

ThermalEye

Thermography Monitoring System

ThermalEye is a modular and flexible temperature monitoring system based in radiometric infrared cameras. The system is able to capture the temperature distribution of a surface in milliseconds with automatic detection of hot and coldspots.

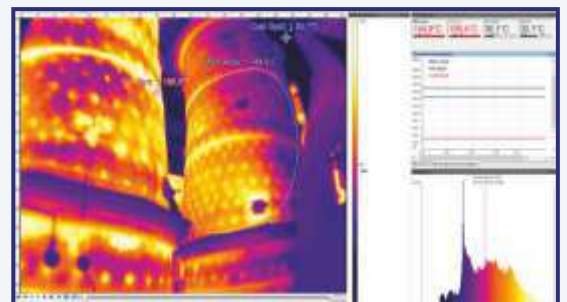
ThermalEye system is ideal for different type of applications such as monitoring the temperature outside of furnaces, boilers, glass metal tanks, etc. in order to prevent any damage to the refractory like cracks. ThermalEye system is also used for monitoring heat or gas leaks, the bottom ash hopper and the flare of furnaces, resulting in significant energy savings and improved plant safety.

Benefits

- 24/7 temperature monitoring of areas
- Real time detection of hot and cold spots
- Customized installation for temperature monitoring of large areas
- Maintenance of large areas
- Maintenance free operation
- Recommended by leading insurers
- Modular expansion. The system can be expanded at any time with further cameras and workstations.



ThermalEye flare stack monitoring

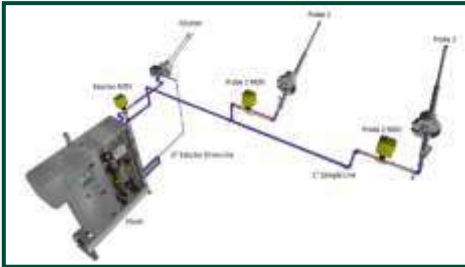


ThermalEye software



GREEN BANK U.K- On-Line Carbon in Ash Analyzer

GCAM®

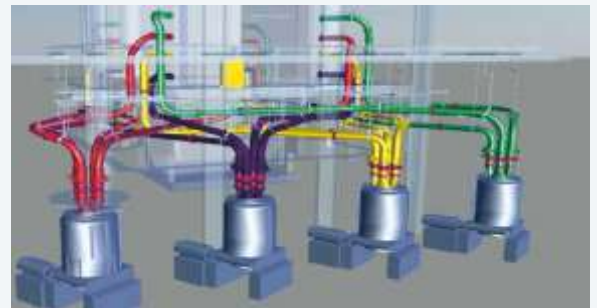


- Accurate and repeatable carbon in ash measurement
- Latest microwave absorption and phase shift measurement techniques
- Suitable for all coal types
- No load cells or density measurement
- Low maintenance
- Rapid iso-kinetic sampling
- Up to 6 multi-point sampling capabilities
- Increased handling rate up to and over 2Kg per hour
- Touch screen control
- Self protecting against boiler oil burning shut down and start up
- Automated, sample segregation for lab analysis

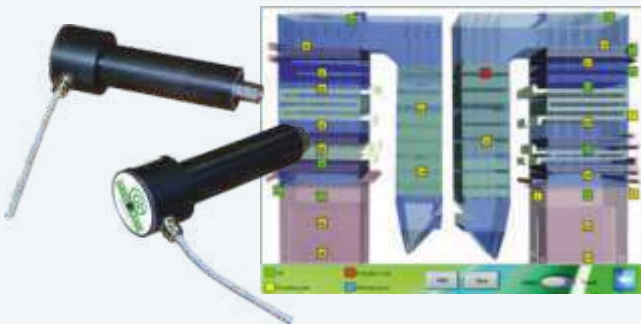
GREEN BANK U.K - On-Line PF Coal Flow Measurement

- The PFMS is designed for use on pulverised-coal flow balancing and measurement monitoring system.
- A single cabinet can connect up to 32 sensors to measure coal distribution and velocity in pulverised-fuel (PF) burner feeds.
Poor fuel distribution causes combustion inefficiency.
- A breakthrough in analysis of Coal-flow transport behaviour and distribution to boiler burners has opened up the possibility of improving combustion efficiency significantly.

PFMS®



GREEN BANK U.K - Boiler Tube Leak Detection System



The Greenbank GA200® series advanced acoustic steam leak detection system is for use on large electric utility boilers which operate using gas, oil, biomass, black or brown coal. The system accurately identifies and locates a boiler tube leak in its early stages against the noise of an operational boiler.



Enhancing Performance
www.greenbankgroup.com

AIRFLOW SCIENCES EQUIPMENT, LLC - Coal Flow Measurement Test Equipment

- Measure primary air flow rates (clean or dirty)
- Perform coal flow sampling (according to ISO or ASME)

Standard Equipment



ISO 9931 Measurement System



Dirty Air Probe (DAP) Test System



ASME PTC 4.2 Coal Sampling System



Automated Test Systems

- accurate
- repeatable
- efficient



The Advanced Coal Flow Measurement (ACFM™) System

The ISO 9931 Measurement System with Automated Probe Actuation™ (ISO-APA)



AIRFLOW SCIENCES EQUIPMENT, LLC - Duct Flow Measurement Test Equipment

- Measure stack gas velocity and volumetric flow rate
- Includes instrumentation and data acquisition software



3D Probe Data Acquisition System (3DDAS™)

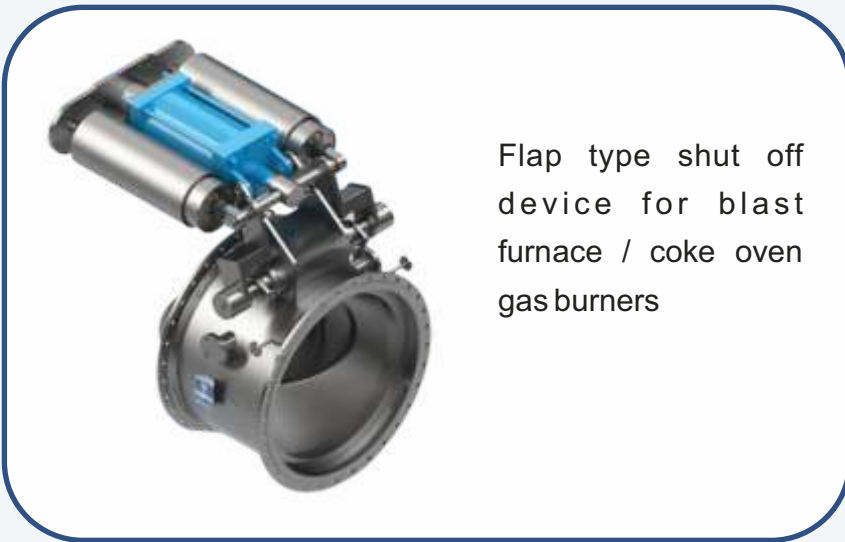
 Airflow Sciences Equipment, LLC

www.airflowsciencesequipment.com



Burner Fuel Management Skid along with Quick Tight Shut Off & control for

- Heavy Fuel Oil
- Light Fuel Oil
- HSD
- Atomising steam



Flap type shut off device for blast furnace / coke oven gas burners

3 Way Specialised Damper



Main Shut off Damper for Pulverized Coal Burner with Integrated Burner Cooling arrangement.



Fuel Shut off valve stations for gas turbines and compressors.

SERVOVALVE- Heavy Duty Pneumatic and Hydraulic Actuators

Servo valve quarter turn actuators are designed to operate ball, butterfly, plug or any other valve with 90° rotation, for on-off or modulating service. Rack & Pinion actuators are mainly adopted for small size valves or for very critical and accurate modulating service, while scotch yoke executions are preferred for medium and big size valves, due to their capacity of exerting output torques at 0° and 90° valve position. To perform the best possible output torque diagram relevant to the valve requested torque, scotch yoke is available in symmetric or canted execution.

Servo valve linear actuators are designed to operate gate or globe valves, for on-off or modulating applications. These high performance actuators are compact and provide a simple but reliable design with particularly accurate execution for actuation of process control valves, allowing excellent response with low hysteresis and dead band. Actuators can be supplied as double acting or spring return and manufactured to operate in the most severe working conditions. Standard operating temperature range min -20°C max +80°C. Available on request execution for low temperature (up to -60°C) or high temperature (up to 200°C).



SELF CONTAINED HYDRAULIC ACTUATORS
FIRE PROOF ACTUATORS
ACTUATORS FOR NUCLEAR PLANTS
FAST ACTING ACTUATORS FOR TURBINE BYPASS

COMPACT ACTUATORS FOR OFFSHORE APPLICATIONS
DIRECT GAS OPERATED ACTUATORS FOR PIPELINES
ELECTROHYDRAULIC ACTUATORS
QUARTER TURN ACTUATORS FOR CONTROL VALVES



LINEAR ACTUATORS
(for globe, gate, axial valves.)



QUARTER TURN COMPACT ACTUATORS
(for ball, butterfly, plug valves.)



QUARTER TURN ACTUATORS
(for ball, butterfly, plug valves.)

SPECIAL HYDRAULIC CYLINDERS

Each cylinder is unique. Adapted to the requirements of your project and designed for maximum reliability and safety.

**Piston diameter up to Ø 1500 mm
Piston rod length up to 14000 mm**



SUPPLY/SPARES PARTS/REPAIR/ MAINTENANCE



FIXTURE CONSTRUCTION

Custom solutions as per customer requirement profile.

AGGREGATES & SYSTEMS

Complete hydraulic system with cylinder, power unit and control system from one source.



OUR CLIENTS



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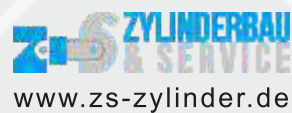


www.absr.in

OUR PRINCIPALS



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EMPOWERING PEOPLE

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