NATCO announces the availability of the SureFire 200 Series Pilotless Burner System. The system is specifically designed to meet the demand for a safer, environmentally sensitive, and cost effective means of controlling industrial oil and gas well burners.

The SureFire 200 Series Pilotless Burner System utilizes a patent pending Hot Surface Ignition Process, along with advanced digital electronics to monitor and control industrial burners located on various style Tanks, Separators, and Dehydrators present on many Well Locations.

The SureFire 200 Series provides safer burner ignition by eliminating the pilot and electronically controlling the Burner System. It also features various safety options designed to temporarily turn off and bypass the Burner Ignition when a situation occurs that could be deemed unsafe to people or equipment.

The SureFire 200 Series offers a cost effective system with an expected pay-out of approximately 18 months for most installations.

SureFire 200 Series Pilotless Burner System sends more natural gas down the sales line instead of into the atmosphere.

Features:

- Pilotless Burner System using a patented hot surface ignition process
- Enhanced safety options
- Digital system with LED display and membrane keypad
- Accurate temperature sensing utilizing an RTD
- 12 Volt battery operated
- Remote observation of temperature through a 4-20mA output signal
- Remote On, Off, and Alarm Out capabilities
- Optional venting gas bypass
- Optional loss of fuel gas bypass
- Optional low fluid level bypass
- Optional high temperature safety shutdown

Safety and Environmental

The SureFire Pilotless Burner System offers more than ease of operation and financial benefit. Safety and Environmental considerations add significant value to the System.

The **Safety** aspects are more than noteworthy with the leading factor being the removal of an open flame from the well pad or designated operational area. It further offers the initiation of burner restart in any instance of burner flame loss, thus limiting the unsafe introduction of flammable gas in the work area. If, in a restart mode, there is a failure to re-ignite the burner, the system will shut down the burner fuel and even provides an additional option of "calling" the office to alert the need for system attention.

Environmentally, the System offers two obvious benefits. The first, because the System uses a proprietary "hot surface igniter", is the absence of a "standing pilot" which constantly emits effluent into the atmosphere. The second, and equally important, and possessing demonstratively more cost savings, occurs when there is a loss of flame. The Surefire system will "fail closed" with an ultimate loss of flame. The vast majority of burners today do not possess flame detection thus, when loss of flame occurs, fuel gas can be emitted to the atmosphere until an operator is on location and remedies the situation. It is not uncommon to have this gas release situation for numerous hours and, on some occasions, days.

Typical Cost of Using a Conventional Pilot and Burner System

Typical Pilot and Burner System

Based on 100 burners burning 210 days per year @ $8.00 MCF/D

- Pilot gas used per day – .75 MCF/D
- Pilot gas used x 100 burners – 75 MCF/D
- Cost of pilot gas used per day – $6.00
- Pilot gas used x 100 burners – $600.00
- **Cost of pilot gas in 1 year – $126,000.00**

Burner Fuel Loss When Pilot Goes Out

Based on 100 burners with 2% of the pilots blown out each day

- Burner fuel loss: 11.12 MCF/D
- Burner fuel loss x $8.00/MCF – $88.96
- **Burner fuel loss per year – $35,584.00**

Maintenance and Man Hours

Along with gas being burned or lost, with a pilot and burner you also have maintenance and man hours.

- Typical service to clean a plugged pilot – $47.00
- Service x 100 burners – $4,700.00
- Average time to light pilot – 15 minutes
- Average time x 2 burners per day – 30 minutes
- Average time per year – 135 hours
- Man hours x $25.00 per hour – $3,375.00
- Total maintenance and man hour cost – $8,075.00
- **Total Cost Per Year – $169,659.00**

The SureFire 200 Series is a PILOTLESS burner management system for use on industrial heater applications. The 200 Series utilizes a patent pending Hot Surface Ignition Process capable of igniting raw natural gas with low BTU and high CO_2 content. The Series 200 monitors either the gas temperature or water bath temperature to turn the burner on or off. When the low temperature is below a set point (set by operator) the system will initiate its starting sequence. Once the system thinks ignition occurs, the system will run counting down for 60 seconds. If the system detects a flame, it will continue running until the high temperature setting (set by operator) is reached. If there is no flame detection after 60 seconds, then the system will shut off, wait 2 minutes and again will initiate its starting sequence. It will continue trying to light 13 more times within an hour period. If ignition does not occur, it will go into shutdown and cannot turn back on until the system is reset remotely or by the operator. Once the high temperature is reached, the system will monitor the temperature and initiate it starting sequences when the temperature is below the low setting. The SureFire 200 Series also has built in capabilities for remote monitoring. It can send a 4-20A signal to an operator's automation that will show the temperature of the product the SureFire system is controlling. It can also receive discrete inputs from the automation to turn the system on and off. It will also send a discrete output signal to the automation when a total shutdown occurs. The system is capable of receiving signals from optional end devices to put the system in stand-by or shutdown.

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