



# Tech Note



## Cat Gas Hydrotreater Decontamination

During annual or biannual turnarounds, refineries are faced with bringing Hydrotreater and HDS columns down for maintenance. These processes contain catalysts that must be decontaminated using air and steam.

Heat generated during the decontamination process can combine with purge air to "cook" off the catalyst. Temperature sensors are used to look for hot spots; however, sensor placement is not always adequate for early fire or cook-off warning.

A major US Refinery successfully applied a FEDD Wireless Gas Detection system for monitoring the decontamination process

FEDD Wireless sensors for CO and O<sub>2</sub> were combined with a simple sample system to monitor exit gases for increased CO and decreased O<sub>2</sub> to provide an early warning of combustion in the Hydrotreater.

Stand alone portable wireless receivers allowed the Decomp Team to monitor O<sub>2</sub> and CO values and shut off decontamination air in the event of combustion in the vessels.

### Advantages of FEDD wireless Gas Detectors

1. *Totally Wireless*
2. *Portable Receivers/Indicators*
3. *PC SCADA Receiver for Datalogging.*



Fig. 1 FEDD Wireless Gas Detector

### Typical Systems include:

1. *O<sub>2</sub> Sensors*
2. *CO Sensors*
3. *Sample System for water and particulate removal.*
4. *Portable Wireless Operator Panel*
5. *PC or Laptop with SCADA/Datalogging*



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