A Breakthrough Industrial Process Analyzer

Real-time, High-resolution On-line Analyzer

The motivation

- On-line, Real time and accurate information of the molecular composition of materials in process, is critical in many aspects: *Process control, trading, QA, Environment and more*

- The ***industry 4.0*** revolution (IIoT) significantly increases the need for such information

The Pain

- Accurate information (Gas Chromatography) is slow and requires high maintenance
- Real-time information is either inaccurate (IR) or very expensive (TDALS)

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The product - *SRSensor*™

The First Ever High-accuracy, Real-time Industrial Molecular Analyzer

Analyzer: a metal cabinet containing the lasers generators and the receiver, located outdoor (sheltered) up to 500m from the pipe

Probe: passive (optics only) located near the pipe (ATEX / IECeX zone)

Providing end-users with cost effective molecular information

Enabling improved process efficacy, energy saving, high quality products and improved environment protection

Key features

- For Liquid & Gas streams
- Fits organic and aquatic media
- Single or multi-probes configuration
- High Accuracy - 100 PPM – 100%
- Real-time – 0.1 second /compound
- Low maintenance
  - Lasers based system
  - On-the-fly self calibration
  - No sample preparation
  - No consumables
- Compliant with industry standards (ATEX/ IECeX)
- In “Situ” probe located near the pipe
- Direct measurement - no need for chemometric & statistical models
- Comparable CAPEX and low OPEX
- Very simple installation
- Conforms with Industrial I.I.o.T

PATENT PENDING

Technology

- **Technology basis - Stimulated Raman Scattering** (SRS) - a **proven technology** for high resolution real-time molecular detection, *(Never left the Academia)*

- **Innovative -** Integration of **standard optical components** and **non-linear optics** in conjunction with signal processing from advanced communication and radar technologies
- **Cost optimized-** Leveraging readily available off-the-shelf optical components for high performance at reduced costs

Pioneering the adaptation of proven SRS technology from academia to industry

Development Status and Go to Market

JD project with **GE power** - monitoring the inlet gas in gas turbines
Status: on going pilot in GE power plant in Dalia – Tzafit

Collaboration with **SICK AG** (tier 1 analyzers provider) on analyzer for the Gas industry (production and marketing) **Status:** OEM agreement –under discussions; Pilot in a US gas pipeline - in planning stage