aspectai

AI-60 Process Analyzer

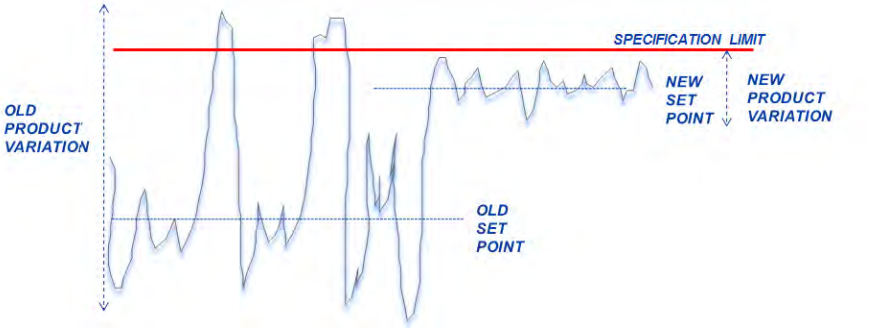
Refinery Process Control Applications

AUTOMATION OBJECTIVES

- Stabilize operation
- Maintain product quality within specs
- Optimize Unit (Production, Energy, Raw Materials)
- Integration with offline systems
- Provide operational tool

AI-60 PROCESS ANALYZER ADVANTAGES

- Real time, continuous flow-through stream analysis
- Provides analysis in dense and opaque materials
- Linear spectral response across broad range
- Minimal maintenance required (no moving parts in sensor)
- Direct and multi-property analysis



ROI: ONE MONTH TO SIX MONTHS

**customer testimonial*

ASPECT AI-60 PROCESS ANALYZER SOLUTION

- Complies with ATEX requirements
- Sample switching and conditioning system
- Sample cell specifications
  - Flow through cell
  - Up to 120°c
  - Up to 24 bar g
- Alarming
  - Digital inputs for alarms
  - Built in user configurable alarm logic
- Communications
  - Modbus (rs485 or tcp/ip)
  - Ethernet to remote interface
- Engineering services
  - Models
  - Systems validation
  - Models maintained for one year after validation
  - Round the clock remote support
  - All hardware under warranty for one year after start-up
- Stream switching
  - Up to 8 streams (including reference stream)
  - Built in user configurable stream switching logic

SAMPLE HANDLING SYSTEM

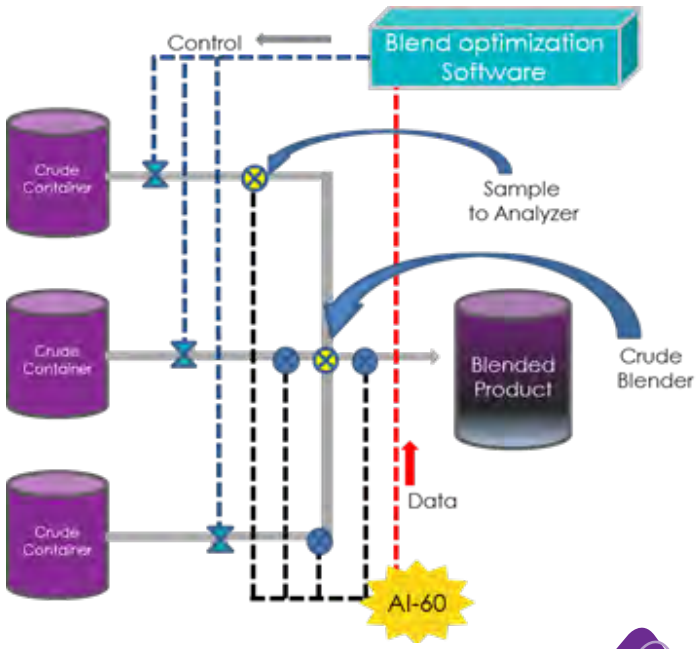
- Flow control
- Filtering
- Temperature control
- Stream switching

PROVEN APPLICATIONS

1. Case study: crude oil blending

Measurements:

API
Sulfur
Water
TAN
TBP wt% 38°c
TBP wt% 105°c
TBP wt% 165°c
TBP wt% 365°c
TBP wt% 565°c



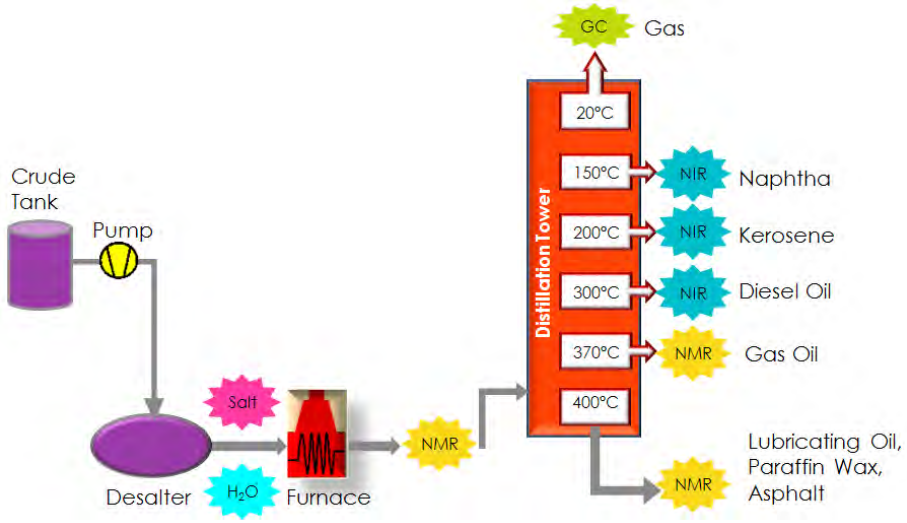
2. Case study: crude distillation unit

Measurements:

AGO - API
AGO -Sulfur
AGO –T10%
AGO –T50%
AGO –T90%

Light Cycle Gas Oil – API
Light Cycle Gas Oil - IBP
Light Cycle Gas Oil –T10%
Light Cycle Gas Oil –T50%
Light Cycle Gas Oil –T90%
Light Cycle Gas Oil - FBP
Light Cycle Gas Oil – Cloud Point
Light Cycle Gas Oil –Freeze Point
Light Cycle Gas Oil – Flash Point
Light Cycle Gas Oil – Viscosity

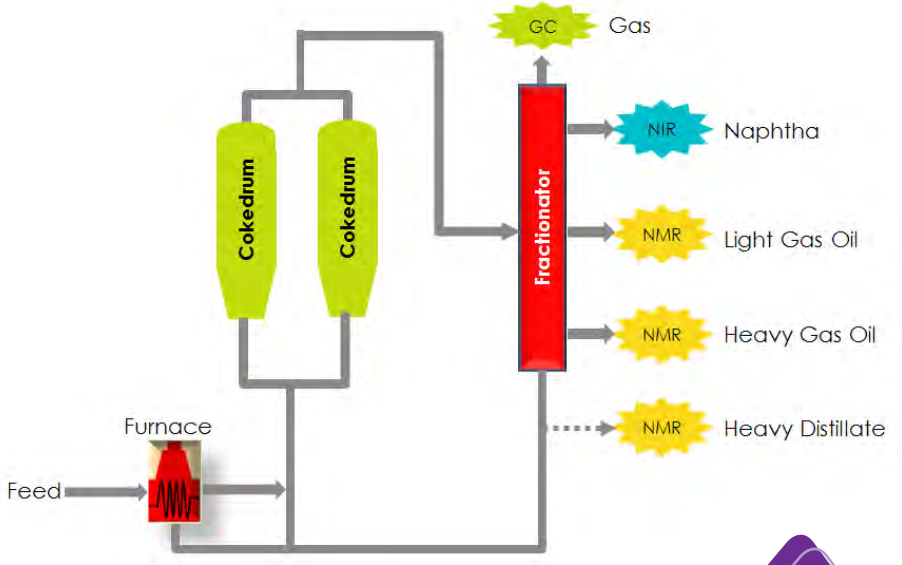
Kerosene - IBP
Kerosene –T10%
Kerosene –T50%
Kerosene –T90%
Kerosene - FBP
Kerosene – Cloud Point
Kerosene – Freeze Point
Kerosene – Flash Point



3. Case study: delayed coker

Measurements:

HVGO - API
HVGO -Sulfur
HVGO –T10%
HVGO –T50%
HVGO –T90%



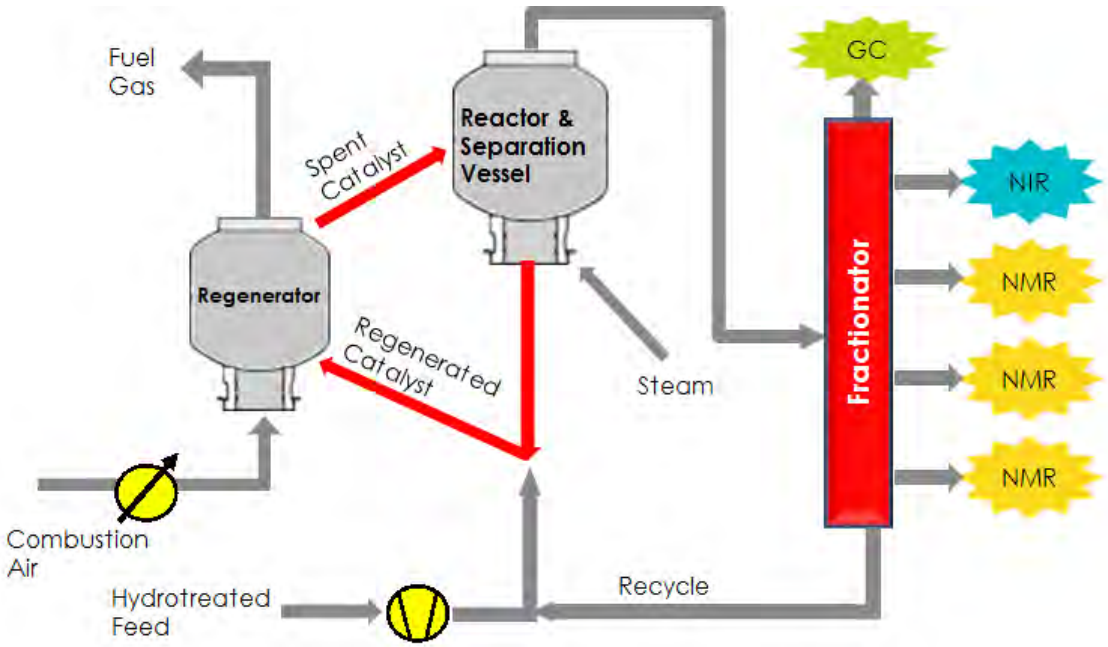
4. Case study: FCC feed

Measurements:

FCC Feed - API
FCC Feed -Sulfur
FCC Feed –T10%
FCC Feed –T50%
FCC Feed –T90%
FCC Feed – IBP
FCC Feed - FBP
FCC Feed – Viscosity

Gasoline Blending –T10%
Gasoline Blending –T50%
Gasoline Blending –T90%
Gasoline Blending - FBP
Gasoline Blending – Aromatics
Gasoline Blending – Benzene
Gasoline Blending – RVP
Gasoline Blending – MON
Gasoline Blending – RON

Diesel Blending –T10%
Diesel Blending –T50%
Diesel Blending –T90%
Diesel Blending - FBP
Diesel Blending – IBP
Diesel Blending – Viscosity
Diesel Blending – Cetane Index
Diesel Blending – Pour Point
Diesel Blending – Cloud Point
Diesel Blending – API



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