

PipeMonit® Swarm

Risk Based Monitoring (RBM)



In Partnership with :



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CMO

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ISO 9001:2015 certified | IECEx certified | Achilles JQS qualified

PipeMonit® Swarm RBM - Risk Based Monitoring

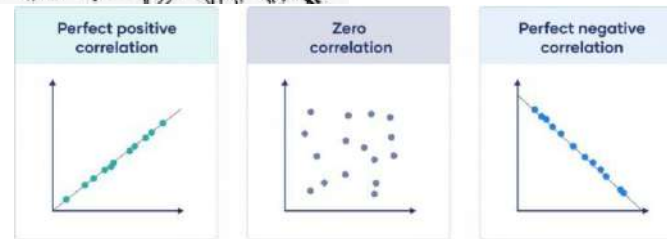


- Intended for monitoring of points of special interest (maximum pipe temperature 150° C)
- Shorter time period monitoring, 3 months to 2 years, in each location
- Replaces/reduces inspection
- Client will have data from the whole time period
- Logging interval can be set according to client requirement
- Easy to install, 1 day(maximum)
- Easy to move to new location
- No maintenance (except battery change every 3 years)
- Wall loss accuracy much better than inspection, 10 µm resolution

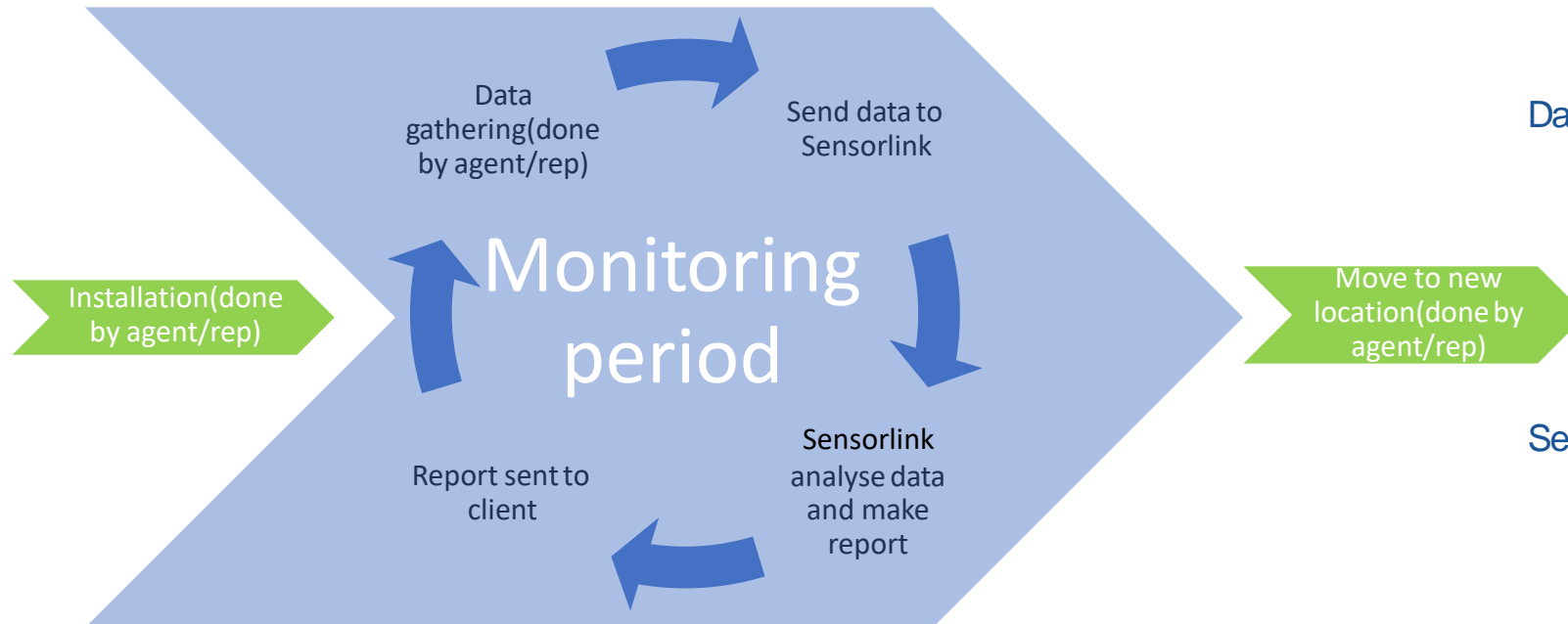
PipeMonit® Swarm RBM - Risk Based Monitoring



- Where to use
 - Locations where client inspect periodically
 - Locations of particular interest where client wish to monitor for a shorter time period to verify degradation models or verify wall loss rates
- Value
 - Better wall loss accuracy/resolution
 - Correlate corrosion/erosion data with process data to get better understanding of corrosion/erosion



PipeMonit® Swarm RBM - Risk Based Monitoring



How to use

Installation, done by agent/partner

- Install Swarm sensors on pipe
- Install Swarm S2 datalogger on the pipe
- Start monitoring
- Battery for 3 years
- 2 years storage capacity (one measurement per day)

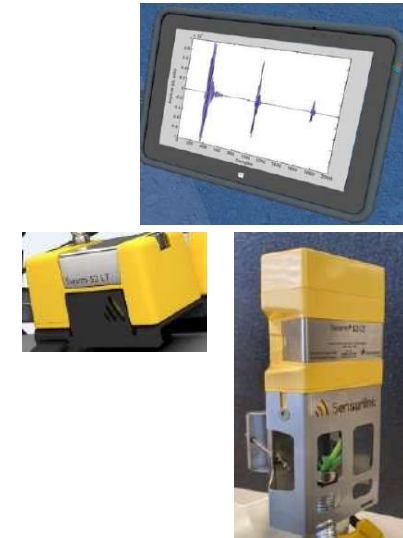
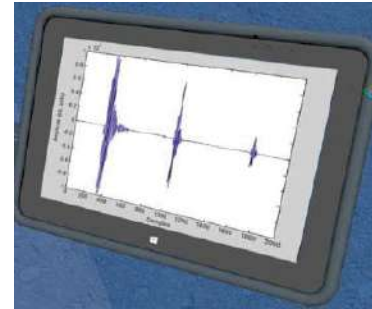
Data gathering by Bluetooth, done by agent/partner

- Data gathering SW installed in laptop (SW will be delivered by Sensorlink)
- Connect laptop through Bluetooth to Swarm S2 datalogger
- Transfer measurement time series
- Send data to Sensorlink through e-mail

Sensorlink reporting

- Data given by Swarm S2
 - Wall thickness time series
 - Temperature time series
- Report from Sensorlink will show
 - Wall thickness, time stamped
 - Wall loss estimates, calculated
 - Temperature, time stamped

PipeMonit® Swarm RBM - HW system configuration



Swarm S2 Bluetooth

1-4 Swarm S2 LT sensors

Data gathering software,
to be installed in laptop

PipeMonit® Swarm RBM
tool

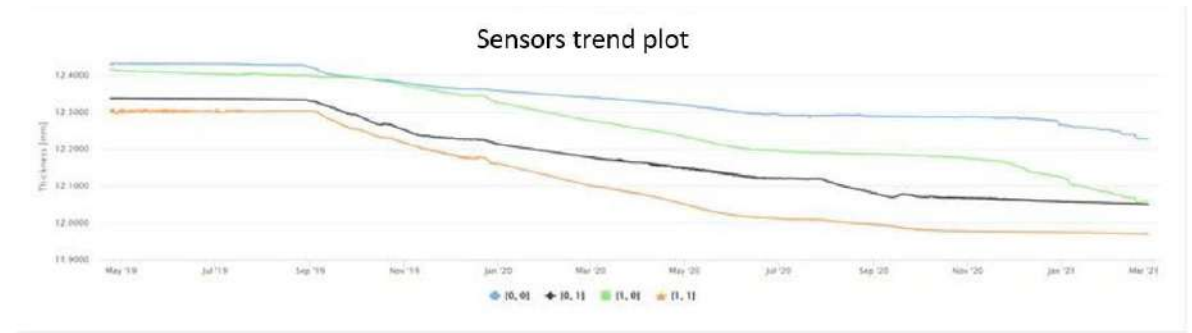
PipeMonit® Swarm RBM - reporting

Last updated by: @lyzain.kaltzarsen
 Last updated: 2018-02-05
 Sensorlink

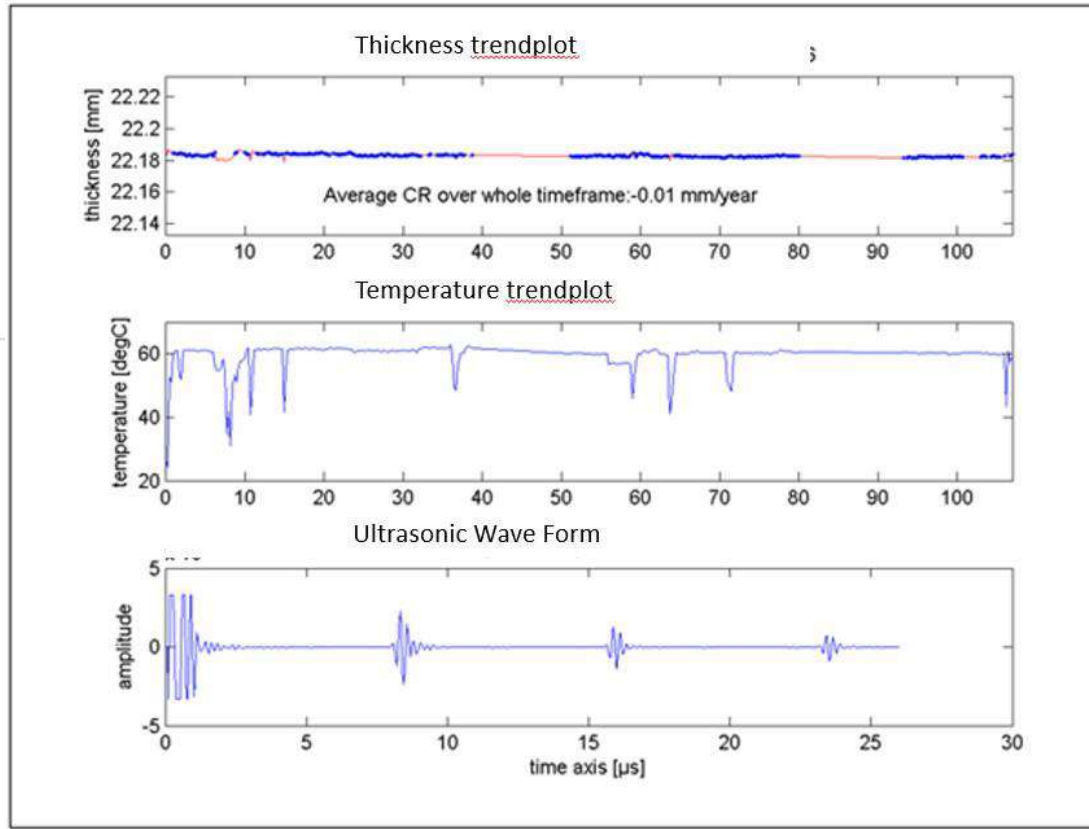
Project: 606xxx Example project
 Document no.: 606xxx-200-xx rev. 01

Monitoring Report

Client: XXXX
 Purchase Order: [Click here to enter text.](#)



Corrosion rate [mm/year]	Thickness [mm]
0	1
0.070	0.165
12.2204	12.8583
0.144	0.124
12.0452	11.9693



Reporting from Sensorlink

- Data given by SwarmS2
 - Wall thickness time series
 - Temperature time series
- Report from Sensorlink will show
 - Wall thickness, time stamped
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 - Temperature, time stamped

PipeMonit® Swarm RBM

Business model: start up cost + pay for reports

Sensorlink income:

- HW start up price
- Fixed price per report
 - Analysis
 - Report writing

Agent/rep income:

- Installation service
- Moving to new location service
- Gather data from PipeMonit® RBM and send to Sensorlink

PipeMonit® Swarm RBM -Benefits

- Less Capex
 - Low entrance price
 - Easy to install, maximum 1 day
- Replace inspection/reduce inspection
- Better understanding of corrosion/erosion
 - Enables correlation between corrosion/erosion data with process data
 - Client will have data from the whole time period (Instead of getting data only from inspection date)

