

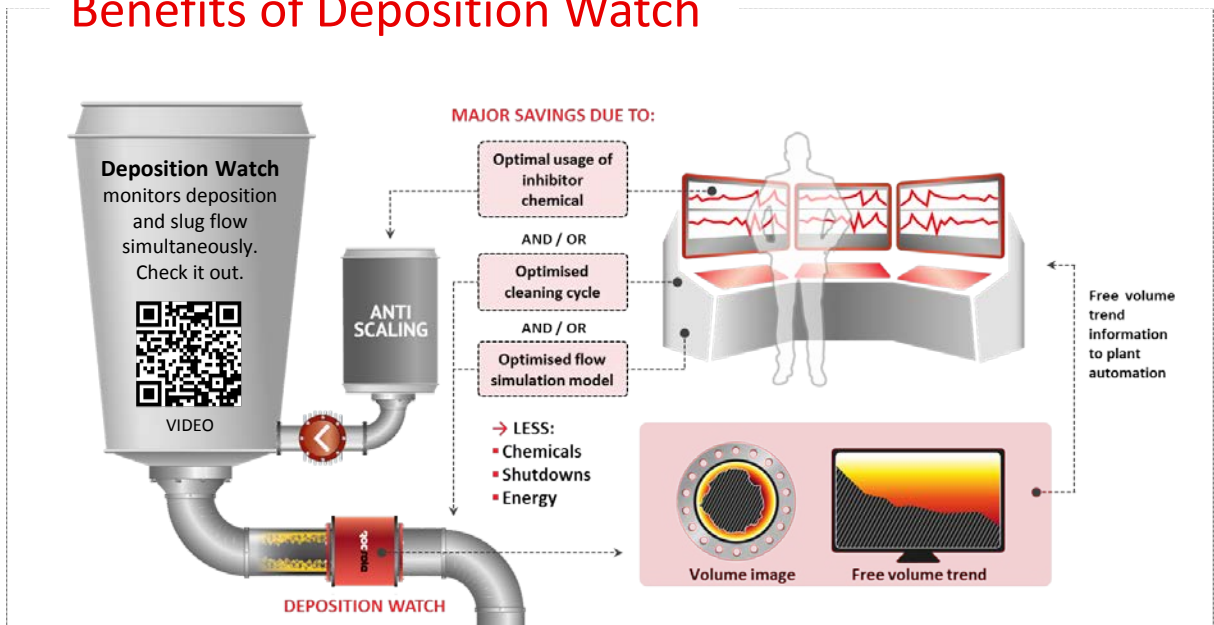


Deposition Watch

Online Pipe Deposition Buildup Monitoring

Deposition Watch is a non-nuclear solution for monitoring of deposition buildup, such as waxes, scales, and sands, and slug flow inside industrial process pipes. The system supplies real-time data of buildup throughout the entire pipe volume with high accuracy, allowing you to optimize preventative actions, such as pipeline pigging or usage of inhibitor chemicals. Deposition Watch sensor is simple to install to the pipe or by-pass line with flanges. The system does not contain a radioactive source or any moving parts, so it requires minimal amount of maintenance.

Benefits of Deposition Watch



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a Solution
for You!

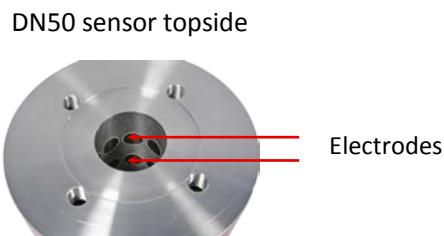
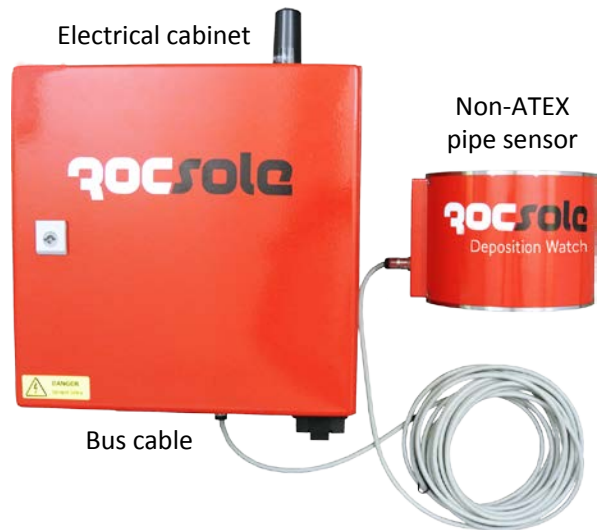
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E-mail us: info@rocsole.com
More info: www.rocsole.com

Rocsole Ltd
Kauppakatu 20
FI-70100 Kuopio, FINLAND



Deposition Watch System

Deposition Watch system consists of the sensor, system electronics and software. The pipe sensor is available in various sizes, standard sizes being between DN50-DN300. The system is available in IECEx/ATEX as well as high pressure and high temperature models.



INDUSTRIAL PROCESS TOMOGRAPHY

Rocsole's imaging solutions are based on process tomography, more precisely ECT (Electrical Capacitance Tomography) and UST (Ultrasound Tomography) technologies. These technologies enable non-nuclear and non-invasive cross sectional or 3D imaging of material properties and distributions in various industrial positions such as in pipes and tanks.

Rocsole delivers industrial process monitoring systems that visualize the inside of pipes and tanks by using non-nuclear tomographic technologies. Our customers use the systems for example for monitoring of pipe deposition and tank level interfaces in order to optimize their processes for major annual savings. Rocsole is headquartered in Kuopio, Finland and operates worldwide.

Read more at www.rocsole.com



Emulsion Watch

Separator Tank Interface Monitoring

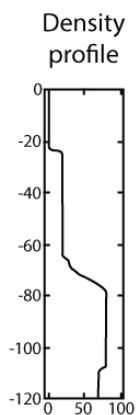
Non-nuclear Separator Interface Measurement

Emulsion Watch is a non-nuclear probe sensor solution for imaging and monitoring of multiple layers inside a separator tank. This offers the operators a possibility to optimize process cycles and chemical usage. The system works with solids, foams, liquids and gases. Emulsion Watch measurement is based on tomographic technology, which enables the probe sensor to work even if contamination is formed on top of the sensor.

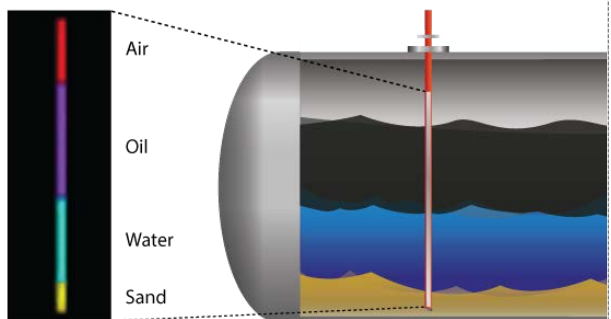
Emulsion Watch measurement works even if the probe gets contaminated. Check it out.



VIDEO



Tomographic image



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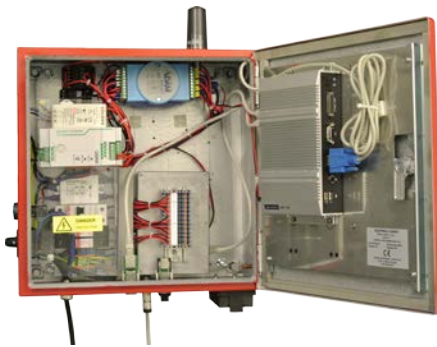
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Emulsion Watch System

Emulsion Watch system consists of the probe sensor installed into the separator tank, system electronics and software. The system components are designed for demanding process conditions.



Data Cabinet



Probe Sensor



TECHNICAL DATA	
Process control connection	mA- message (0..20 mA and 4..20 mA), Modbus/TCP
Remote control	3G
AC power input	100-240V ~ 50/60 Hz
Ethernet	IEEE 802.3u

INDUSTRIAL PROCESS TOMOGRAPHY

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Technical Specifications, Warranties & Support

Pipe Sensor

Technical Specifications

PIPE SENSOR	
Pipe sensor sizes	<p>Standard sizes:</p> <p>DN50 (2") - Length 150 mm (5,9") - Weight ~15 kg (~33 lbs.)*</p> <p>DN100 (4") - Length 150 mm (5,9") - Weight ~22 kg (~49 lbs.)*</p> <p>DN150 (6") - Length 220 mm (8,7") - Weight ~48 kg (~106 lbs.)*</p> <p>DN200 (8") - Length 220 mm (8,7") - Weight ~55 kg (~121 lbs.)*</p> <p>Other sizes on request.</p> <p>*Weight of a non-ATEX stainless steel pipe sensor.</p>
Pipe sensor materials	<p>Sensor body and electrodes: Stainless Steel or Titanium</p> <p>Gaskets: PEEK</p> <p>Other materials on request.</p>
Maximum pressure	Standard model: 16 bar High pressure model: 100 bar Extra high pressure model: 390 bar (Maximum pressure might vary depending on the pipe size)
IP-classification	Standard: IP54 Superior: IP65
DATA CABINET & ATEX POWER CABINET	
Data cabinet size	300 x 400 x 210 mm - ~21 kg (11,8" x 15,7" x 8,3" - ~46 lbs.)
Power cabinet size (only in ATEX)	380 x 430 x 210 mm - ~18 kg (15,0" x 16,9" x 8,3" - ~40 lbs.)
Sensor-cabinet connection	<p>Data cabinet: Bus cable, isolated RS485, maximum length 100 m (328 ft.)</p> <p>Power cabinet (only in ATEX): Cable, maximum length 50 m (164 ft.)</p>
Remote control	3G/4G (LTE), Ethernet. Other connections on request.
IP-classification	IP65
Power consumption	<80W (DN50/2")
COMMUNICATION INTERFACES AND MEASUREMENT	
AC power input	100-240VAC ~ 50/60 Hz
Process control connections	mA-message (0..20 mA and 4..20 mA), Modbus/TCP
PROCESS CONDITIONS	
Process temperature range	Standard model: 0 - +90 °C (+32 - +194 °F) High temperature model: 0 - +200 °C (+32 - +392 °F) Extra high temperature model: 0 - +400 °C (+32 - +752 °F)
Environment temperature range	-20 - +60 °C (-4 - +140 °F) NOTE: Additional cooling is needed for the cabinet in above 40 °C (104 °F) temperatures (the effect of the sun or other possible heat radiation sources must be taken into account).

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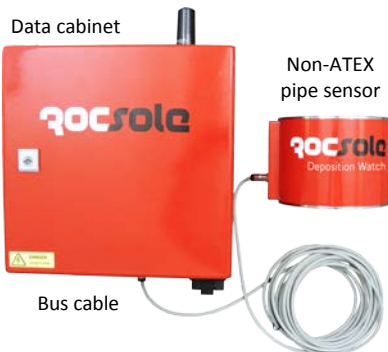


Product Warranties

Technology Warranty	System Warranty
<p>Rocsole warrants that the product is suitable for purposes of deposition monitoring and /or visualization of flow pattern defined in the quotation provided that the Application Specification Sheet has been properly filled and accepted by Rocsole and that the product is installed and used according to instructions and pre-conditions of use .</p> <p>Rocsole is liable only for the technical functionality of the product. Rocsole has no liability in relation to the installation of product by the customer. Rocsole's liability does in no event include consequential or indirect damages exceeding the purchase price of products or cover force majeure situations.</p>	<p>1 year starting from the delivery of the product to the customer.</p> <p>Warranties or liabilities apply only if the site meets the specifications and product is not used against instructions and pre-conditions of use.</p>

Support Services

Remote Support	On-site Support
<p>Requests for support are processed every working day (Monday to Friday) within office hours (8AM-4PM) in Finland (GMT+2).</p> <p>NOTE: Remote support requires a customer permission to use remote access to the system.</p>	<p>Engineer on-site within 5 working days</p> <p>Engineer working and travelling days + travel costs with 10 % handling fee are invoiced from the customer.</p>



IECEX / ATEX sensor



Power cabinet (IECEX / ATEX)



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