This Makes Us Different

30 years of industry experience worldwide

Incorporated in 1991, Intero - The Sniffers is focused to support customers in their environmental objectives.

Innovative technologies and solutions

State of the art software platforms SFEMP and PRIMS for lean work processing and applying new technologies.

Corporate emission and pipeline integrity platforms

Dedicated extensive services around environmental services and pipeline management.

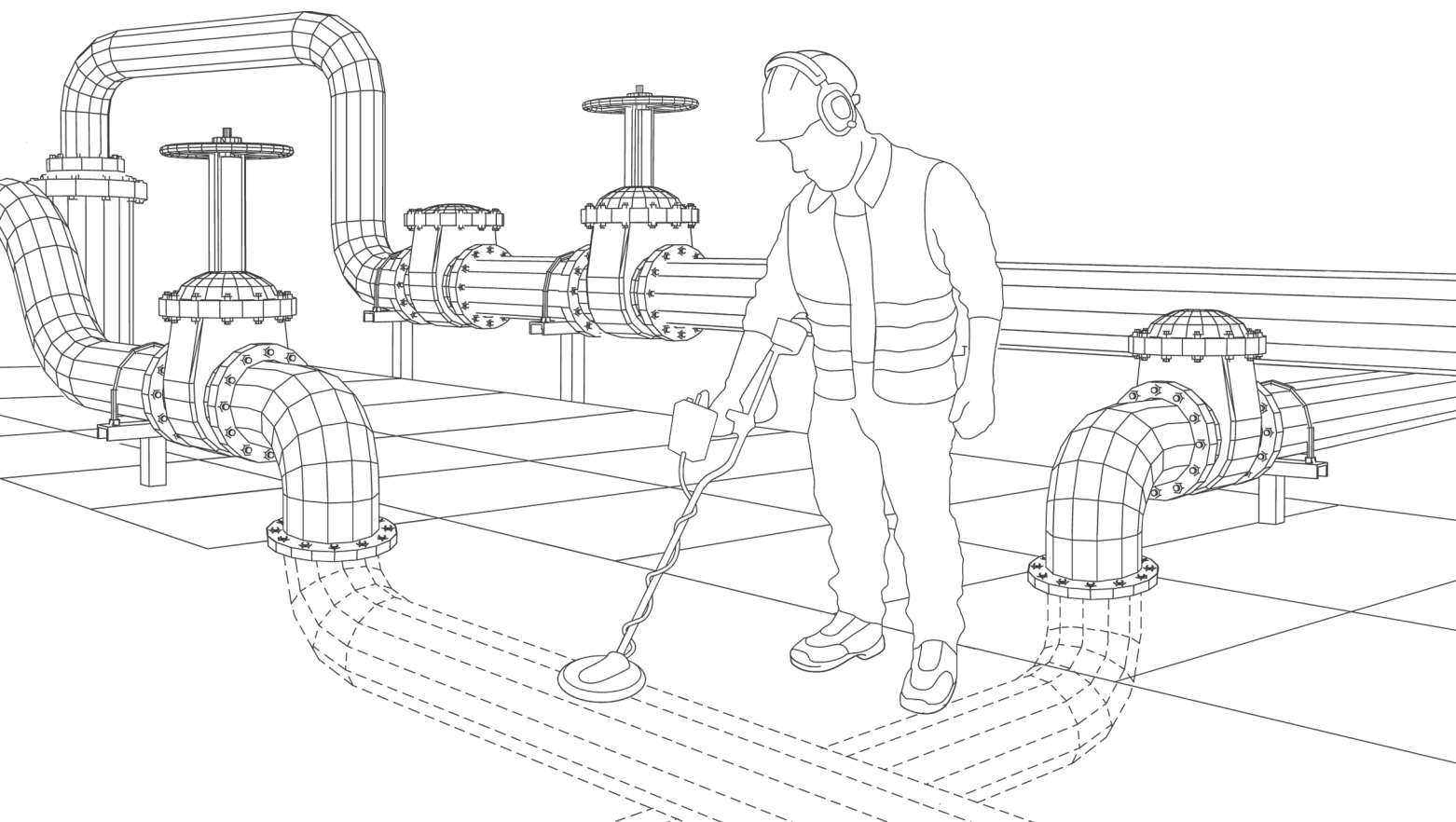## Reliable and accredited processes and methodologies

Intero - The Sniffers is a certified and laboratory accredited organization with ISO 9001, 14001 and SCC, and ISO 17025 612-TEST Belac and 389-TEST Israc.

More than 9.000 emission reduction projects executed

Our global experience enables us to benchmark and identify best practices as well as areas for improvement.

Passionate and dedicated team of experts

Well trained and qualified specialists, listening to the customer and applying best available techniques.

Intero - The Sniffers
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We're all about maintaining high integrity levels of your buried pipelines, right down to detecting even the smallest leak and upcoming corrosion. With our global pipeline integrity surveys and PRIMS, we seek out your challenges to guarantee your safety and reputation, while protecting the environment. As experts in compliance, we're effortlessly efficient and cost-effective. Pipeline integrity is everything.

Ever-evolving solutions

Continuous CP Monitoring

- 24/7 monitoring of the cathodic protection situation of your pipeline network
- Low cost investment and easy implementation
- Cloud-based CP monitoring dashboard
- Clear audit trail with measurement history in the software platform

Introduction of Continuous CP Monitoring

For whom?
Pipeline owners and operators, and integrity managers

What?
IoT measurement devices installed throughout your pipeline network combined with a cloud-based application for cathodic protection monitoring.

24/7 monitoring of your CP system

Capabilities of Continuous CP Monitoring

Always the latest status of your pipeline network
We provide devices to monitor the cathodic protection situation of your pipeline network 24/7. In the event of a malfunction, the correct person immediately receives a message, so you are always up-to-date about the current status of your network.

CP system monitoring
To monitor the cathodic protection (CP) of your pipelines, the devices are connected to the rectifier and to the various measuring points along your network.

This way, the entire CP system can be monitored. Both DC/AC voltage and current are measured. Switching can also be done at the rectifier to perform open circuit potential measurements or to execute works on the network.

An online environment for future-proof CP monitoring
The devices send encrypted measurement data to the cloud-based business application. Manual measurements are also stored here. The map shows which pipe section functions well or needs attention. An overview clearly shows which actions need to be taken, which can then be analyzed and executed. This makes modern CP management possible.

About the devices

Energy efficient
Our devices are designed to last. In addition to a large battery, we use energy-efficient electronics and communication equipment. The service life of the communication is also guaranteed by means of a 2-in-1 or 3-in-1 module with GPRS / NB-IoT / LTE-M.

Secure
All data is encrypted (DTLS) so data cannot be read by third parties. Over- the-air (OTA) firmware updates are possible to allow remote security updates or the addition of new software functionalities.

Easy
The devices are designed in such a way that they are easy to install by field engineers or contractors (plug and play sensors). With an automatic connection to our platform and your GIS systems, the device is also directly linked to the correct asset (for example, a measuring pole or pipe section). The measurements are immediately stored correctly in your systems.

Easily accessible, secure, and interconnective

Access
You can access the platform via computer, tablet and mobile phone.

Security
The encrypted data is stored with daily backups. Two-factor authentication or Active Directory link (single sign on) is possible on request.

Link with GIS systems / PRIMS
All measurement data can be made available through API links. The cloud-based business application can also be synchronized in real-time with your GIS system or with our Pipeline Integrity Management System PRIMS®. Generated issues can be sent to your own work order systems if required.

Users
You can assign rights per user (read only, set threshold values, adjust measuring frequency, etc.). An audit trail keeps track of historical changes that are made.

Compliant
Compliant with:
- IEC 61000-6 1/2/4
- IEC 61000-4 2/3/4/6
- IEC 55011

Functionalities

Historical measurements
The history of measurement values and issues are stored to create a complete overview per measurement location, pipeline network or area. You can visualize data per day, month, year or 5 year period.

Thresholds and alarms
Thresholds per measurement can be set per location, pipeline network or area. Additionally, you can determine which user receives which alarms and the frequency when a threshold is crossed.

Manual measurements
In addition to an overview of measurements from devices, manual measurements can also be added to the software platform if required.
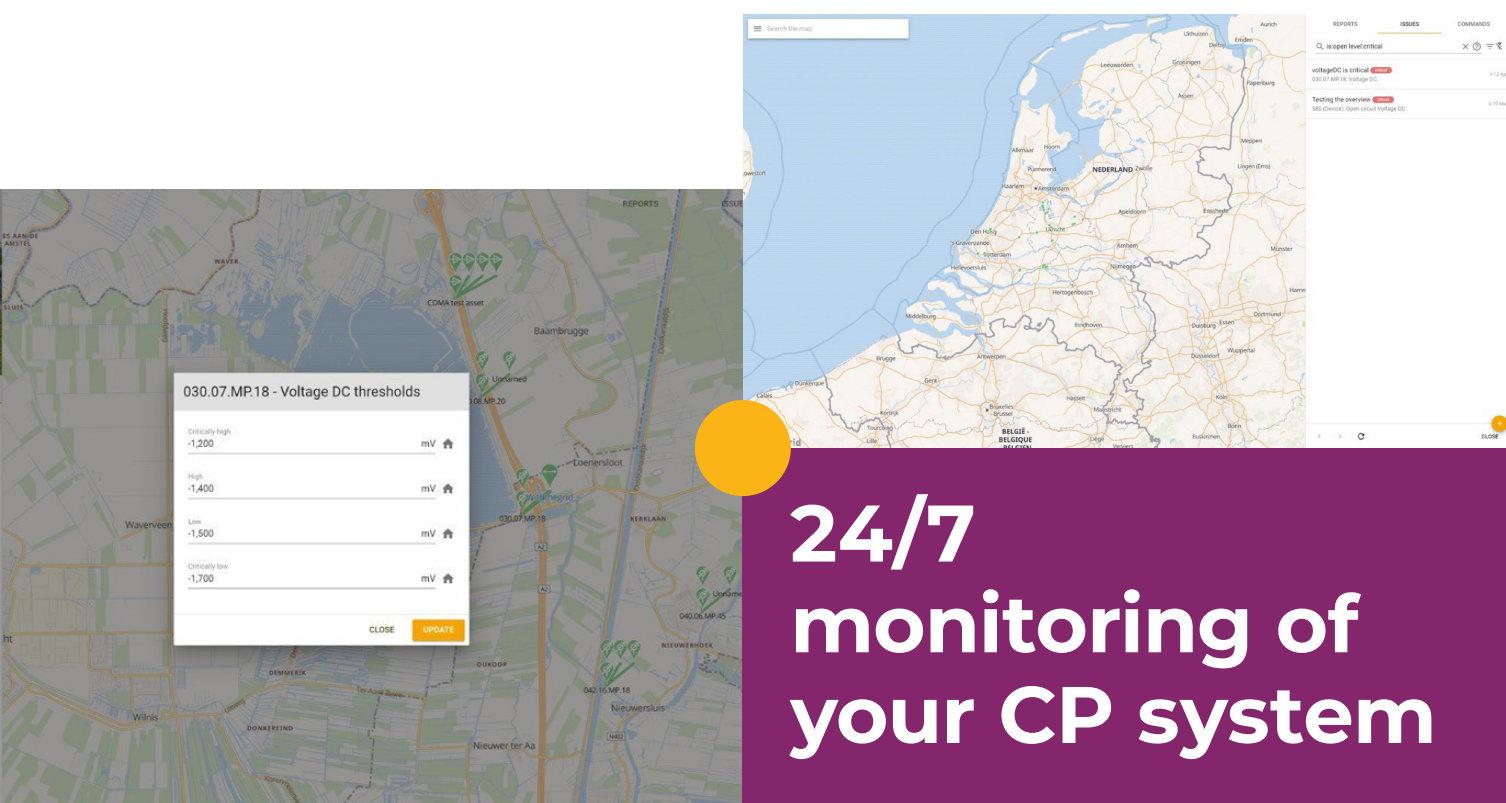
Issue tracking
If the threshold values are exceeded, an issue is automatically created. As user, you can comment and discuss each issue. Depending on a successful follow-up action, you can then close the issue. Issues can also be created manually for, for example, an additional inspection.

Product-specific commands
Commands can be sent to the devices from the online business application. For example:
· Adjusting measurement frequency (1X / 5 minutes to 1X / week)
· Execute open circuit potential measurements or perfrom a DCVG
· Switch off the devices to perform works on the pipelines

Self serviced or managed service

We offer our Continuous Cathodic Protection Monitoring service as a self service as well as a managed service. Your technicians can install the devices and perform the monitoring themselves. Or we can install the devices, monitor, and perform follow-up actions.

Your benefits

Make strategic decisions
1
· Take action when treshold alarms are crossed
· Clear audit trail with complete measurement history

Manage risks
3
· More in-depth and faster insight into the quality of your pipeline network
· Can be used at locations that are difficult or dangerous to reach

Reduce costs
2
· Analyze trends and detect repetitive anomalies by analyzing measurement data
· Low installation cost

What is measured where?

Our Continuous Cathodic Protection Monitoring service is designed for pipeline networks that are protected by cathodic protection. The devices can monitor whether the cathodic protection is still sufficiently protecting your pipelines.

The system provided by our partner Withthegrid is in line with EN13509: 2003, EN12954: 2001, EN50162: 2004 and can be used to measure at measuring points, isolation joints, drains and at rectifiers. On potential, open circuit potential as well as stray currents can be measured. Furthermore, switching of the rectifier allows you to perform specific measurements such as DCVG.

24/7 monitoring of your CP system

1. Rectifier
· Voltage AC+DC (Anode / Cathode and grids)
· Current AC+DC
· Frequency AC+DC

Extra functionality
· Switching CP for open circuit potential measurement
· Switch CP for DCVG
· Switch off the device to carry out works
· Modify rectifier setting (Amstel modbus version)

3. Isolation joint
· Voltage AC+DC
· Frequency

Extra functionality
· Current AC+DC
· Open circuit potential measurement

2. CP measurement (end)point
· Voltage AC+DC (max. 3 grids)
· Frequency AC+DC (Coupon IR-free)
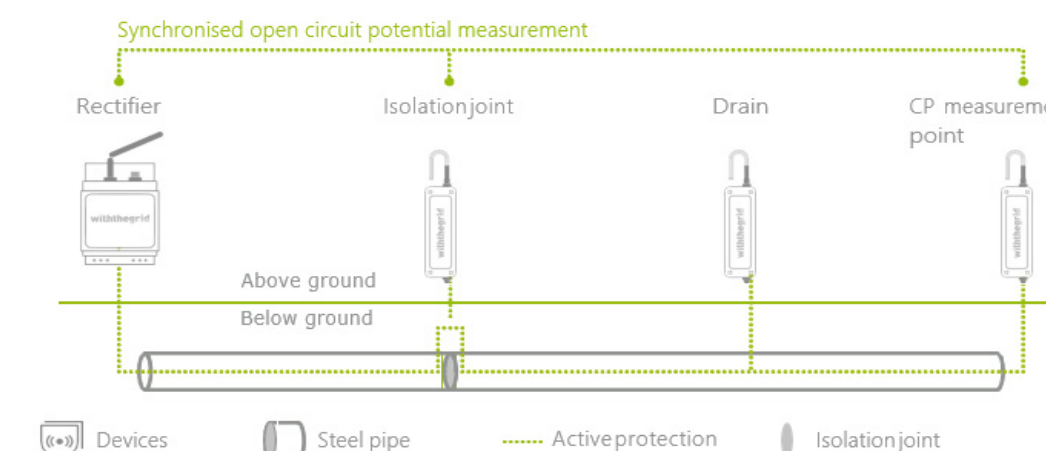· Current (coupon)

Extra functionality
· Open circuit potential measurement (together with rectifier)
· 24hr on potential measurement
· 24hr stray current measurement (Coupon)

4. Drainage
· Voltage AC+DC (Pipe, rail)
· Frequency
· Current AC+DC (Coupon, drain)

Extra functionality
· 24hr drain measurement AC+DC

Synchronised open circuit potential measurement

Rectifier Isolation joint Drain CP measurement point

Above ground
Below ground

Devices Steel pipe Active protection Isolation joint

Specifications: Amstel (or other) monitoring
Product code: CP-modbus
· Read Amstel rectifier
· Adjust Amstel rectifier settings
· Change measurement frequency
· · Turn off rectifier for works
· · Communication protocol: GPRS/LTE-M
· · IP-rating: 20
· · Dimensions: 90*53*58mm
· · Power supply: 24VDC

Specifications cathodic protection
· Range and accuracy of AC+DC voltage: +/- 50mV-
· 100V @
· +/- 1% + 1 digit resolution
· Range and accuracy AC+DC current: +/- 10mA-20A

· @ +/- 2.5% + 1 digit resolution
· Frequency AC: 16 - 100 Hz (digitally filtered)
· Number of AC+DC voltage channels: 3 + 1 ref.
· Number of channels voltage current: 1 (in combination with max. 3 voltage channels)
· Impedance: > 10 MOhm
· Switch accuracy: +/- 1 ms
· Sampling rate and frequency: 500hz (2ms), one sample every 60ms (30 measurements)
· Power supply: Battery (without replacement for 6 years with 4X / day measurement) or 230V
· Communication protocol: LTE-M
· Remote adjustable measuring frequency (1X / 5 minutes to 1X / week)
· Rectifier control: Connected to external relay. Custom switching frequency (e.g. 0.2/0.8s, 10s/2s)
· Dimensions: 250*80*70mm
· IP rating: 67