



Spin-off of VUB's Electrochemical and Surface Engineering research group (SURF)

Established in 2013

Milestones

- **2009** Corrosion monitoring concept identified within the SURF research group and preparations start up
- **2012** Offering extended from pure corrosion monitoring to broad, integrated monitoring
- **2013** Zensor established as an independent company providing integrated monitoring solutions
- **2014** First contract with major pipeline operator
- **2014** Business angel investor to support the company growth
- **2014** Spin-off deal reached with VUB
- **2014** First >100 k€ contract signed with an industrial partner
- **2014** Collaboration agreement signed with international service provider in petrochemical and wind industry

Zensor

ICAB | Witte Patersstraat 4 |
1040 Brussels | Belgium

CEO Yves Van Ingelgem
[M] +32 (0)473 35 89 74
[E] info@zensor.be
[W] www.zensor.be



Engineers in a box

Zensor is a start-up from VUB's **Electrochemical and Surface Engineering research group (SURF)** in the 2nd half of 2013. The company started its activities based on the corrosion monitoring technology licensed from VUB. Gradually this offering was expanded through demands from the market. Today Zensor offers 'engineers in a box' for various markets: roadside service stations, (offshore) wind farms, buried pipelines, (petro)chemical plants, civil infrastructure... Zensor provides the ideal tool for **risk reduction and maintenance optimization**. Its solutions monitor the infrastructure and automatically generate alarms when things threaten to get out of hand. Daily or monthly reports are produced, indicating which locations require maintenance.

One-stop shop for all your monitoring needs

Interpreting corrosion-related data is a complicated task requiring a lot of additional information. Therefore the initial, corrosion-centered monitoring solutions were gradually expanded to allow a thorough understanding of the situation at hand. This included coupling multiple sensors and external data as well as setting up a reliable monitoring scheme. As a result, today Zensor offers **automated, intelligent and integrated monitoring solutions** for all application domains listed above. After installation no human intervention is required. These integrated solutions include design, the required sensors and monitoring unit, data transfer and storage coupled with the automated intelligent reporting, alarms and advanced reports based on the data. A one-stop shop for all your monitoring needs. The selection of the industries was based on extensive experience as well as the intrinsic ability to easily scale the solution within each application domain. The term 'integrated' also refers to the tracking and recording of a broad spectrum of parameters in the same location or setup. This results in early detection linked to a more

profound understanding of what exactly is going on, without having to go to the premises. Intelligent monitoring is obtained through algorithms that detect trends in recorded parameter values, linking these to the phenomena they originate from.

A lot of emphasis is put on the reliability of our solutions, not only in a mechanical aspect, but also by ensuring specific attention to backup power, storage as well as communication if required. This results in minimizing the amount of blind spots in the data.

Zensor's sensors

In complement to the monitoring packages, Zensor offers 2 **in-house developed sensors**: (1) a sensor to follow up corrosion activity on metallic surfaces and (2) a sensor to measure robustly the integrity of grouts and concrete.

Zensor's remote monitoring solutions can include:

- | | |
|-----------------------|------------------------------|
| o Corrosion activity | o Dissolved oxygen levels |
| o Concrete integrity | o Displacements (LVDT) |
| o Temperatures | o Strains |
| o Pressures | o Accelerations/vibrations |
| o pH | o Loads (load cells) |
| o Inclination | o Liquid levels |
| o Cathodic protection | o Leaks |
| o Material loss | o Electrochemical Potentials |
- **For the offshore wind industry:** full foundation monitoring packages to ensure the structure remains in an optimal state for the foreseen service life of 20 years or more, up to lifetime extension.
 - **For the onshore wind industry:** detecting and determining the extent of cracks in concrete foundation structures
 - **For roadside service stations:** operators can keep an eye on their entire network. Safety measures and consumption are included, but also operational parameters such as temperatures. Giving alarms in dangerous situations, but also providing statistics to identify underperforming sites.
 - **For civil infrastructure:** follow-up of the integrity of concrete together with temperatures, cathodic protection and other relevant environmental parameters. External influences such as stray currents can also be included.
 - **For buried pipelines:** follow-up of the cathodic protection system and specialty solutions to determine corrosion activity and external influences such as stray currents.



'The full power of data is only harnessed when quality and integrity is assured from recording up to interpretation and reporting.'

Yves Van Ingelgem, CEO



Technology
Transfer
Interface
Brussels

Technology Transfer Interface
Vrije Universiteit Brussel • Pleinlaan 2 • B-1050 Brussel • Belgium
[E] rd.interface@vub.ac.be • [W] www.vubtechtransfer.be • [T] +32 (0)2 629 22 07



Vrije
Universiteit
Brussel