

#### 13:30 -15:00: Presentations

- The importance of practical research, testing and demonstrating innovations - Jeroen Tacq and Joey Bosmans, Sirris
- How in-the-field measurement of coating performance leads to cost reduction - Tje Wei Hu, C-Cube
- The use of drones for faster and more cost-efficient inspection -TerraDrones

#### 14:20 - 14:50: Break

- Innovations in corrosion inspection Dekra
- Condition monitoring of claddings; the basis of QA/QC on CUI Stork

15:30 – 16u30: Table top exhibition & lab visit (2 groups in parallel)

#### Demos:

- C-Cube coating monitoring and inspection
- Grindosonic
- TerraDrones
- Hyperspectraal cameras for coating inspection
- MetroOhm
- TestLABS

15:45: Closing reception and networking





Visitor network T0gether@Sirris

Europees Fonds voor Regionale Ontwikkeling



Zero capital letter







# CorrosionLABS - Open Lab Day

The importance of Applied Research, Testing and Demonstrating Innovations Het belang van praktijkonderzoek, testen en demonstreren van innovaties

Jeroen Tacq and Joey Bosmans, Sirris





- Large concentration of industry in border region Flanders –
   Netherlands
- Corrosion is a major problem: safety, environment, production losses, loss of reputation → High Costs
- Tackling corrosion requires:
  - Test facilities, Anchoring of knowledge
  - Increased innovation and cooperation











#### Goals

- ✓ Platform for industry oriented R&D and testing
- ✓ Realistic test environments to develop and demonstrate Corrosion Management Solutions
- ✓ Improved education



Simulated industrial environment



Laboratory testing



Maritime environment





#### Strengthen the network in the BeNeLux

#### www.corrosielabs.com





























#### The importance of Applied Research, Testing and Demonstrating Innovations

- Stay ahead, but don't take unnecessary financial or safety risks
- Improved understanding of performance and capabilities of innovations

## Innovation project

#### Simulated industrial environment

- More controlled testing, but still very realistic
- Limited acceleration
- Not standardised



#### **Field Trials**

- The real deal
- Slow process
- Difficult to interpret and compare solutions

- Strongly accelerated
- Compare potential solutions
- Not easy to link to 'real' performance
- Standardised

#### Laboratory testing



## Corrosion @Sirris

#### SOCORRO project goes for smart management of corrosion

July 5, 2020







In any kind of industry where water meets steel, corrosion is an underestimated threat and a very expensive one too, contoxion costs for the European region alone amount to 500 fallion euro, according to a DNV-GL report. However, there is no generally accepted approach which is followed in the industry to assess the risk of corrosion and use this for smart corrosion management.

It is believed that up to 1/3 of all costs related to corrosion prevention and maintenance can be avoided by a smarter, more efficient system to manage the corrosion problem. Creating such a Smart Corrosion Management system is the goal of the recently started SOCORRO project in which Siris is one of the key partners.





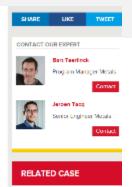
#### Controlle voorkomen veel goedkoper dan genezen | Maintenance Magazine

#### CORROSION MANAGEMENT

#### Duurzame oplossingen voorcorrosiemanagement

Corroste is een waak onderschat probleem in elke sector waarin water in contact from met metaal, goals in de marmone wereld, offshore constructios, havenindustrie, witterzuivernigsstations, staalkonstructies.... Onder aurewiese enstandicheden falleen metalen het flink te verdaren en kancomple optreden. De koeten gelinkt aan oprode hebben een enormeimpact on de economie, in een rapport van DNV GL wordt de sinemene. kosten die kunnen werden toegewegen aan eurosie deschat op 38 procent. van het Europese BBP, of ruwweg 500 miljerd euro. Omdet tot een derde van corrosio-genelatzende kosten zeu kunnen vermeden worden, speelt het. uttralien van innovaties in committenanagement een cruciale roi. Sittis adviseers hierbij bedrijven zowel rond preverne als montoning van comose. Erkel door le beschikken ever de juiste informatie kannen goedebedissingen genomen worden, rowel op een technisch als managementravenii. Een aangepast ontwerp, juste selectie van materialen. en coatings, en een door data gevoed risico-gebaseerd insoectiesysteen. kunnen bedrijven heel wat geld besoeren.

Sirris is betrokken in verschillende initiatieven en onderzneksprojecten moddeze topics



Parkwind berekent impactivant

van windfarbines

comosients on de restievensduur.





bryour company using 3D-printed components or do you want to dart using them? This webtrer will inform you about the specific consision issues that can occur with 3D printed components. The possibility to participate in a collective research project on this issue will be presented.





# Challenges

- Corrosive degradation process is complex
- Not one case is the same
- Background information is often lacking
  - Process
  - Environment
  - Use
- Customers seek for fast and clear solutions
- Lab testing versus real life



## Qualification testing: case Cowboy



- Evaluation of product quality
- Evaluation of degradation mechanism and failure models
- Comparative testing

#### GOAL:

- Product control
- Product improvement
- Marketing (quality label)



## Qualification testing: case Rockfon



- Evaluation of product quality
- Different part designs
- Different treatments
- Swimming pool environment?

#### GOAL:

- Product control
- Product improvement
- New update EN norm



## Failure analysis

- Route cause analysis
  - Chemical analysis
  - Microscopic evaluation
- Simulation testing
- Mechanical component testing

#### GOAL:

- Understanding failure mechanism
- Seek for solutions
- Advise on material use, part design, coating,...





### Anti-corrosion solutions

- Critical market overview
- Best coating system for the job

#### GOAL:

- Offer independent advise on anticorrosion coatings
- Technical support







- Process evaluation
- · Coating criteria

Market

- · Independent screening
- Information sourcing

Advise

- Application & testing
- Evaluation



# Corrosion monitoring and inspection









# Data and AI drive a mindset change in Corrosion Management

- Evaluate sensoring and inspection techniques.
- Risk monitoring based on data and Artificial intelligence (AI).
- Modelling combining lab data and results from field testing.
- Sirris is a partner in many research projects.



Open Lab Day Scalda

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www.corrosielabs.com







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driving industry by technology



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