



Working Party 13

Minutes of Business Meeting

Face to face meeting:

Room Lysefjorden B, Forum Expo, Stavanger, Norway (Eurocorr 2025)

Date: 10th September 2025 14:40

Agenda

1. Introduction
2. Review of minutes from the 2024 WP13 business meeting
3. Feedback from the Science and Technology Advisory Committee (STAC)
 - a. Details of the EURCORR 2025 update
 - b. Financial support for specific projects.
 - c. Young EFC
 - d. WP13 additional webinars/short symposia
4. WP 13 Green Book Involvement
5. Best Poster(s) Award
6. Review of the 2025 WP13 symposium
7. Upcoming events
8. Other business
9. Short presentations

1.Introduction

George Winning, Chair of WP13, introduced the working party and welcomed the participants present. We apologise for the issues with online attendance. Ultimately, the meeting was held entirely in person.

2.Review of minutes from the 2024 WP13 business meeting

- No comments.
- Accepted.

3. Feedback from the Science and Technology Advisory Committee (STAC)

- **Details of Stavanger EUROCRR 2025**
 - Over 1200 attendees from 52 countries
 - 607 Oral presentations planned
 - 14 Parallel sessions → There were difficulties aligning the programme, with many overlaps, mainly with CCS and Hydrogen sessions
 - 135 posters planned
 - Improvement since last year: fewer missing papers because authors were rejected if they did not register before 1 June.

Working Party 13

Minutes of Business Meeting

➤ **WP13 chairing team (2024-2027)**

Chair: George Winning // george.winning@woodplc.com

Vice-chair: Jon Kvarekvål // jon.Kvarekval@ife.no

Secretary: Pilar Esteban // pesteban@tubacex.com

YEFC link : Ajay Krishnan // ajay-krishnan.m@shell.com

Members without portfolio:

Karsten Wiegers // karsten.wiegers@intertek.com

Torben Skovhus // tols@via.dk

- Re-election of chairs will take place at the next Eurocorr in Dublin
- Current positions are usually kept for three more years if the current holders are still interested; otherwise, volunteers will be welcomed.

➤ **Financial support for specific projects**

- Budget: total of 4000 euros per year across all WPS
- Possible ideas: seminars, webinars, etc.

➤ **Young EFC**

- Ajay Krishnan (Shell) is the link between WP13 and young engineers.
- Collecting possible ideas for collaboration.

➤ **Interest in additional WP13 events apart from WP13 business meeting at Eurocorr**

- No suggestions in the room; open to proposals.

4. WP13 Green book involvement

➤ **Green books associated with WP13**

- EFC Publication No 26: "Advances in corrosion control and materials in oil and gas production", 3rd edition.
- EFC Publication No 17: "Corrosion Resistant Alloys for Oil and Gas Production: Guidance on General Requirements and Test Methods for H₂S Service", 2nd edition
- EFC Publication No 16: "Guidelines on Materials Requirements for Carbon and Low Alloy Steels for H₂S-containing environments in Oil and Gas Production", 3rd edition.
- EFC Publication No 32: "Working Party Report on the Life Cycle Costing of Corrosion in the Oil and Gas Industry: a Guideline"
- EFC Publication No 39: "The Use of Corrosion Inhibitors in Oil and Gas Production"
- EFC Publication No 55: "Corrosion under insulation (CUI) guidelines"
- EFC Publication No 64: "Recommended practice for corrosion management of pipelines in oil and gas production and transportation"

Working Party 13

Minutes of Business Meeting

➤ Review of existing Green Books

- There is a proposal to update **Green Book 64**, which is 14 years old:
"Recommended practice for corrosion management of pipelines in oil and gas production and transportation"
 - The update could also include pipelines for CO₂ and H₂, transportation and storage. WP24 and WP26 may therefore be involved in the preparation as well.
 - Volunteers from the three WPs would be welcomed to help with the green book update. It is necessary to identify a leader and a team (5-6 people) to work on the document.
 - Expected online meetings: three per year and possibly a face-to-face or hybrid meeting at Eurocorr
 - Timescale: 2-3 years
- Other proposals for review from the ISO 15156 Maintenance Panel: **Green books 16 and 17**.
- Others likely to require extension of scope and updating: **Green books EFC 39 and 32**.

➤ New EFC Green books (available online)

- EFC 71: Corrosion modelling with cellular automata
- EFC 72: Corrosion management of sea water cooling systems

5. Best poster(s) award

➤ The 2025 Eurocorr winner is:

- "Anticorrosive properties of surface film formed by the adsorption of Imidazoline derivative and CeCl₃ on surface of Carbon Steel"

Authors: Tihomir Borko¹, Gordana Bilic², Tea Gorvat²

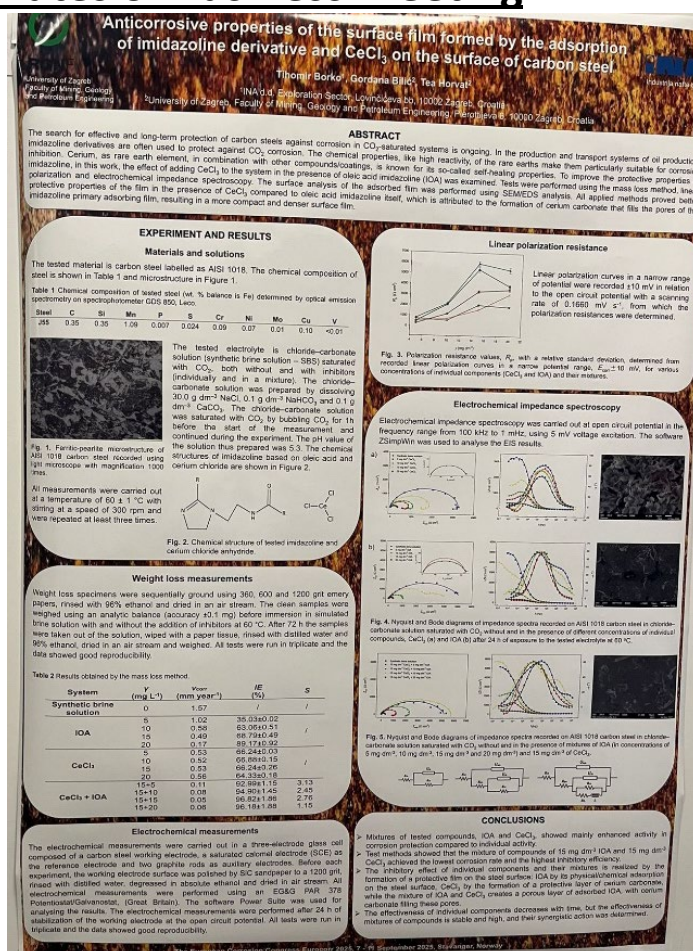
1) INA, d.d., Zagreb, Croatia

2) Faculty of Mining. University of Zagreb

- ✓ ACTION: The winners were not present in Stavanger and should be informed afterwards. George will send them the award certificate.

Working Party 13

Minutes of Business Meeting



6. Review of the 2025 WP13 symposium

➤ Some figures:

- 34 registered oral presentations
- 2 additional short presentations
- 13 posters
- The first session on Monday 8 had 120-130 attendees, and most sessions attracted around 70-80 attendees despite clashes with parallel CCS and hydrogen sessions
- Shared presentations will be available after the conference on the EFC website

7. Upcoming events

➤ Next Eurocorr 2026 in Dublin - 6-10 September 2026

- Abstract submission by 16 January 2026

➤ Eurocorr 2027 in Prague – 12-16 September 2027

➤ Eurocorr 2028 – Awarded to Ljubljana – Slovenia - Dates to follow

Working Party 13

Minutes of Business Meeting

8. Other business

- AMPP Italy 4th International conference and expo, 9-13 June Genoa, Italy
 - Proposal for collaboration with a WP13 representative during the event.
 - A WP13 business meeting may be held as well
 - The organization will extend to WP13 members the same discounted rates already available to AMPP members

Chairman of the AMPP Italy Chapter:

Marco Cattalini // marco.cattalini@coreconsultancy.it

- **MIC course (Programme Euromic)**, the week before Eurocorr Dublin, Kilkenny, Ireland

- Training course specifically oriented to industry professionals
- Cross action over the past four years
- More than 200 people through a CV
- Strong team of teachers

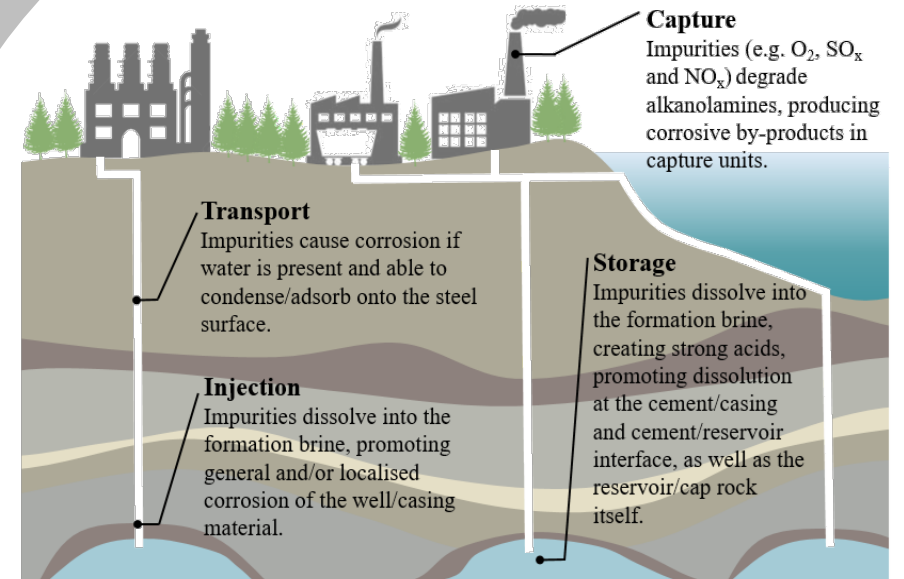
Announced by: Torben Skovhus // tols@via.dk

9. Short presentations (5 min)

Presenter	Affiliation	Title	To be available in WP 13 web page
Carol Taravel-Condât	Technip FMC	Impact of epoxy resin on the pH of test solutions	No
Ricky Barker	Leeds University	Joint Industry Project: Corrosion in Impure Supercritical CO ₂ : Understanding and Responding to Upset Conditions	Yes
Riccardo Rizzo	DNV	Joint Industry Project: Water quality pre commissioning of pipelines	Yes
Shenqi Zhou	NPL	Preferential Weld Corrosion	No

Joint Industry Project: Corrosion in Impure Supercritical CO₂: Understanding and Responding to Upset Conditions

Professor Richard Barker
Professor in Corrosion Science and Engineering



- Carbon Capture and Storage (CCS) is vital for reducing industrial CO₂ emissions.
- A key challenge lies in transporting impure supercritical CO₂ via carbon steel pipelines, where impurities such as H₂O, SO_x, NO_x, O₂, and H₂S can cause severe corrosion.
- This is especially true during upset conditions when impurity levels spike unexpectedly.
- University of Leeds are proposing a 5 year JIP to develop actionable guidelines associated with responding to upset conditions.
 - IFE and Keytech (Bijan Kermani) supporting with system and guideline development
 - Initial positive discussions with Wood regarding their involvement, as well as several other companies.

Programme Structure



UNIVERSITY OF LEEDS

Phase 1: Baseline System Development (Years 1 to 2)

- Design and build a dynamic reactor to simulate impure CO₂ pipeline conditions.
- Integrate real-time corrosion monitoring and hydrodynamic modelling.
- Validate impurity injection and control systems using H₂O, O₂, and SO₂.

Phase 2: Defining Upset Conditions (Year 3)

- Establish what constitutes an upset (duration, frequency, impurity type)
- Develop corrosion maps to assess severity and intervention thresholds.

Phase 3: Continuation Point – Response and Recovery (Year 4)

- Test chemical treatments (inhibitors, scavengers) to mitigate corrosion
- Use machine learning to optimise treatment strategies and response times.

Phase 4: Industry Guidelines (Year 5)

- Deliver comprehensive, actionable recommendations for managing upset conditions.
- Provide monthly updates, quarterly reports, and sponsor engagement.

Industry Impact

- Safety: Prevent pipeline failure and CO₂ release.
- Economics: Define tolerable impurity limits and cost-effective mitigation.
- Standardisation: Enable reproducible testing and cross-institutional collaboration.
- Innovation: Advance CCS technology through real-time monitoring and AI-driven insights.

Participation & Funding

Sponsor Fee: £20,000/year

Minimum Sponsors Required: 6 to 7

Lead Staff: Prof. Richard Barker (University of Leeds) and Prof. Bijan Kermani (KeyTech)

Pre-commissioning - Quality of Water in Pipelines

Challenge

Several pre-commissioning activities require the use of water in the pipeline, e.g. pigging, pressure testing, cleaning. In addition to pre-commissioning, water may be used for mothballing and/or longer installation time, typically for years.

Many operators and pipeline installation companies lack requirements and guidelines in selecting the right water type and treatment with regards to the material their pipeline is made of. The operational use of the pipeline will also impact the water treatment strategy.

Solution

DNV foresees to perform laboratory tests of the most common pipeline materials (both carbon steels and corrosion resistant alloys) with different types of water to conclude on different storage times and water qualities.

- Establishment of acceptance criteria for water quality control
- Identification of required tests
- Gathering of water samples from JIP
- Specification of test matrix and review by JIP
- Exposure testing
- Analyses (corrosion rate, visual inspection, optical microscopy, water and deposit ATP/qPCR, chemical composition of corrosion and water)
- Summarizing of work in a technical report

Benefits and value

The results of these tests will give input to a guideline with recommendations towards water selection, sampling, chemical treatments, and storage times.

This guideline will provide operators and pre-commissioning contractors with a solution adjusted to their relevant waters. It will contribute to improving predictability and reduce project delays and when allowing less conservative water specifications.



Delivery

The delivery will be a JIP guideline that will summarize the work and including recommendations.

On the longer term, the goal will be to implement these findings in an appendix to DNV-RP-F115.

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