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# **Tribocorrosion in industry: experimental approaches and case examples**

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# Case 1: Martensitic steel in simulated waste solution



# Case examples 2: Thermally sprayed hard metal coatings WC-10Co-4Cr and 45Cr<sub>3</sub>C<sub>2</sub>-37WC-18NiCrCo in paper machine environment

# Conclusions

- Verification of tribocorrosion as the degradation mechanism for metals under industrial conditions is challenging
  - Unusually high degradation rates typical
  - Verification of the presence of both corrosion and wear/tribology
  
- Role of synergy is extremely important
  - Analysis requires fixing/adjustment of several variables in experimental configurations
  - Can be categorized into "corrosion-induced wear" and "wear-induced corrosion"
  - Methodology developed for quantification of the synergy components in pin-on-disc experiments
  - Case examples provided for non-passivating and passivating material systems

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