

# Materials and Failure Analysis

## Corrosion and corrosion prevention

**Sulzer Innotec**

**Corrosion costs money. In Switzerland alone, corrosion damage and its consequences result in costs of around 10 billion Franks a year. Furthermore, the consequences of corrosion can pose a direct threat to the environment or even human lives. Most corrosion damage is, however, avoidable if current principles of corrosion prevention are followed. Our specialists can build on long-term experience profound knowledge in a broad variety of applications.**

**Test methods**

- Electrochemical corrosion testing
- Long term exposure tests at elevated temperature and pressure
- Various test conforming to standards, e.g., salt spray tests, condensation water tests, and tests for Intercrystalline Corrosion (IC)
- Tests for flow induced corrosion, e.g., erosion-corrosion or cavitation-corrosion



*Corrosion damage on a conveyor belt roll-bearing*

**Our services**

- Consultancy for materials selection, coating selection and the application of corrosion prevention measures.
- Corrosion testing
- Quality assurance by application oriented testing
- Ageing studies and evaluation of the risk of corrosion



*Stress corrosion cracking in a brass pipe taken from a heat exchanger*

**Failure Analysis**

- Investigation of corrosion related damage and failure
- Independent expert reporting (e.g., for validation of claims)
- Recommendations for corrosion prevention, e.g., for materials selection, protective coatings, design changes etc.

**Special services**

- Measurement of low rates of corrosion
- Investigation of microbiologically influenced corrosion (MIC)
- Development of tests to simulate specific service conditions
- Training and development of techniques according to specific customer requirements



*Tribo-corrosion test stand to determine electrochemical corrosion related data*

**Delivery**

Depending on the type, specification and duration of the required corrosion analysis.

Sulzer Markets and Technology Ltd

**Sulzer Innotec**

P.O. Box

CH-8401 Winterthur, Switzerland

Phone +41 (0) 52 262 21 21 Fax +41 (0) 52 262 00 15

E-mail swa.innotec@sulzer.com

Internet:www.sulzerinnotec.com



Akkreditiert  
Nr: STS 013