

Marine corrosion in offshore constructions

E.10



Mitigate corrosion by understanding the mechanisms, consequences and risks

Background

Offshore installations are expected to operate in a harsh marine environment, but since the lack of accessibility makes repair and maintenance of the structures costly - it is crucial to choose the most suitable materials and protection in the initial design. Furthermore, the life expectancy of offshore constructions is not a static value as e.g. changing environmental conditions, production variations, new installations on existing structures, safety issues or failures may call for an evaluation of the corrosion conditions.

For an oil & gas production facility or an offshore wind farm in contact with both marine atmosphere, seawater and the seabed – the safety, environmental and commercial impact of a failure is substantial. The aging of existing installations and recent development projects have accentuated the need for updated knowledge of marine corrosion.

Participants

The course is relevant for engineers and technicians involved in handling materials in marine environment with special focus on offshore constructions. The typical participant could be working with design, operation and maintenance, or on a more strategic level. It will be beneficial to have a general knowledge of materials and chemistry, but no specific background knowledge is required.

Course purpose

The participants will receive an introduction to corrosion and obtain an overview of corrosion issues encountered in marine media, with special focus on cases from offshore constructions. The main objective is to better understand occurring corrosion attacks, predict risks and avoid future failures.

Duration

2 days
from 09.00 - 16.30

Date and venue

1-2 May 2018

FORCE Technology
Park Allé 345
DK-2605 Brøndby

Course language

The course will be given in English.

Course fee

10.300 DKK excluding VAT, including teaching materials, lunch and refreshments.

Contents

The following topics will be included:

- Introduction to corrosion basics – theory, types and mechanisms.
- Corrosion in marine zones – atmospheric, splash, immersed and sediment.
- Stability of typically applied metallic materials – steel, stainless steel, aluminium, copper alloys.
- Design-related corrosion types: Galvanic corrosion, crevice corrosion, corrosion at welds.
- Mechanically affected corrosion types: Stress corrosion cracking, corrosion fatigue, wear and flow effects.
- Microbially influenced corrosion and accelerated low water corrosion.
- Hydrogen-related degradation.
- Cathodic protection basics.
- Corrosion protection by coatings.
- Corrosion control by design.
- Better life expectancy estimation by inspection and monitoring.

The course schedule will allow discussions and include short group exercises.

FORCE Technology reserves the right to programme changes.

Please note that the specific topic of corrosion in seawater cooling systems is covered in detail in our course E.81.

Registration

Please register at www.forcetechnology.com/da/kurser/materialeteknologi-og-korrosion or with Jette Jacobsen - jtj@force.dk – minimum two weeks before course start.

If three or more persons from the same company register, a discount of 20 % on the course fee will be granted.

Maximum number of participants is limited to 20.

Conditions for cancellation

If you are unable to participate, you are always welcome to give your seat to a colleague.

You can cancel or postpone your attendance until 6 days before course start. By cancellation later than 6 days before course start, the full course fee will be charged.

Further information

For detailed information about the course, please contact specialist Troels Mathiesen, ph. +45 43 25 04 53.