

IAPWS-2017

August 27th -1st September 2017, Kyoto

- 102 participants from 13 countries
- Working Groups (WGs)
 - TPWS – Thermophysical Properties of Water and Steam
 - IRS – Industrial Requirements and Solutions
 - SCSW – Sub-Committee on SeaWater
 - PCAS – Physical Chemistry of Aqueous Solutions
 - PCC – Power Cycle Chemistry
- Purpose
 - Connecting academia and industry to provide problems and research needs to researchers and to update engineers on research results
- Outcome
 - Releases/guidelines on physical and chemical properties
 - TGDs for the power industry



PCC & the work on TGDs

- TGDs released in 2016 (see <http://www.iapws.org/techguide.html>)
 - HRSG High Pressure Evaporator Sampling for Internal Deposit Identification and Determining the Need to Chemical Clean
 - Application of Film Forming Amines in Fossil, Combined Cycle, and Biomass Power Plants
- Planned TGDs
 - Demineralisation Plant Integrity (**new**, instrumentation, maintenance, supervision)
 - Air In-Leakage (**new**, detection, consequences, **SIAPWS involved**)
 - Corrosion Product Sampling and Analysis for Fossil and Combined Cycle Plants (**revision**, flexible plants, methods, uncertainty , **SIAPWS involved**)

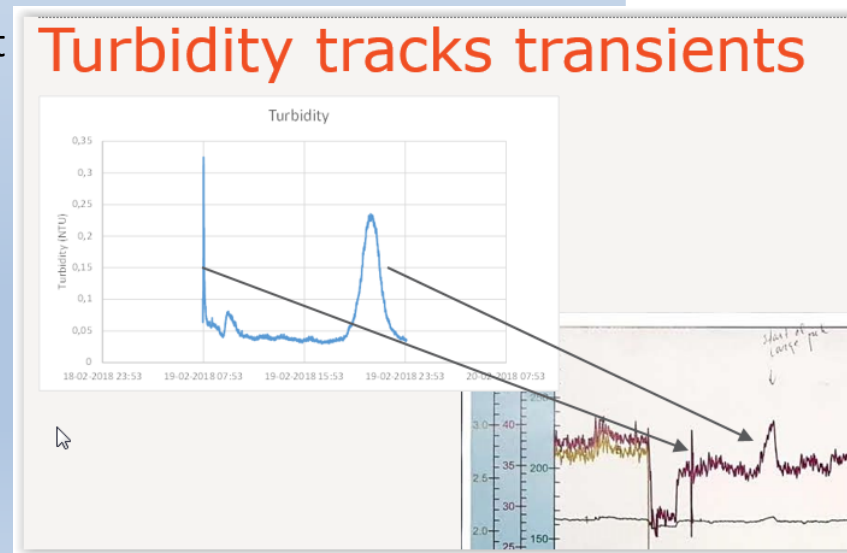
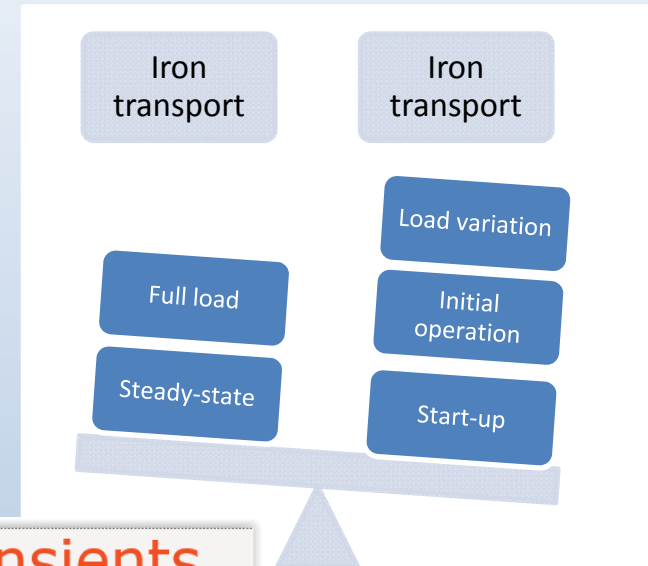
TGD on Corrosion Product Sampling and Analysis

Task group: Addison, Cook, McCann, Thomsen

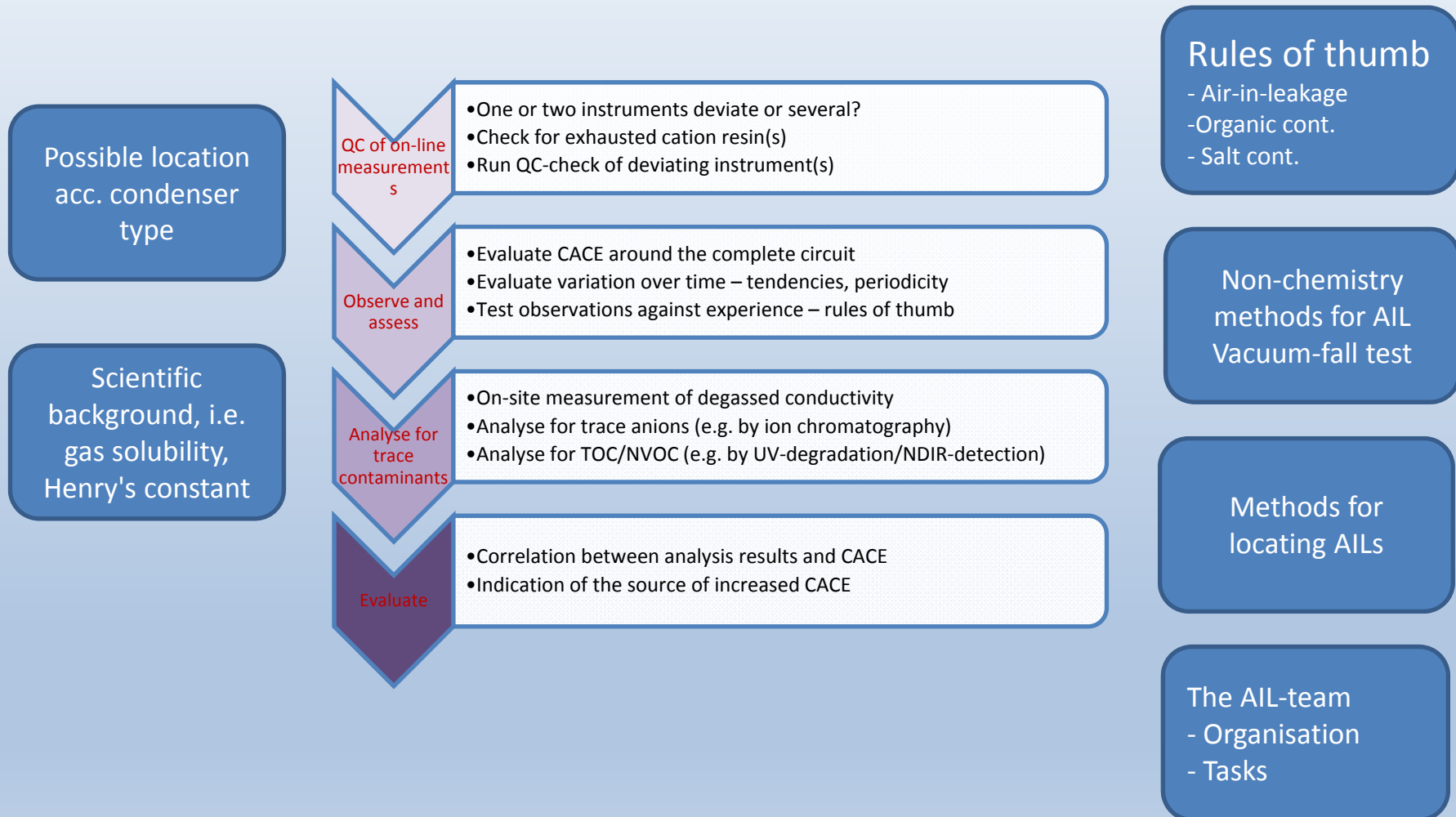
- **Vision for flexible plants**
to sample representatively,
to analyse and interpret corrosion products,
to take the correct cycle chemistry related actions,
to minimise corrosion, corrosion product transport & deposition,
and to minimize the risk of plant failures
- **Activity now – proxy methods**

Turbidity

Particle size/count



TGD on Air-In-Leakage



ICPWS-2018 in September in Prague

- **Nordic contributions**

- **District Heat and Flue Gas Condensation**

- Folmer Fogh*

- **Review of Experiences during the Last Decade on Flue Gas Condensation and the Re-use of the Condensate**

- Roger Lundberg and Karsten Thomsen*

- **Teething problems with Flue Gas Condensate Cleaning Technology**

- Mats Hellman*

- **Microbial Growth in Membrane-Based Plants for Rinsing of Flue Gas Condensate**

- Linda Wiig*

- **Experiences Regarding treatment and reuse of Flue Gas Condensate in waste incineration plant**

- Jani Vuorinen*

- **Design of a new plant for flue gas condensation and treatment of condensate based on 23 years of field experience**

- Niklas Berg*

- **Design considerations for UF filtration and demineralization of flue gas condensate for make-up water**

- T. Dalsgaard, J. Kastensson, A. Svensson, J. Hilden*

SIAPWS Activities

- Connection between the Nordic water chemistry communities and IAPWS
 - Power cycle chemistry guidance – TGD's
 - Promoting experience with FGC treatment
- Central player for information and experience exchange in the Nordic countries
 - SIAPWS Water Chemistry Network
 - On-line courses/workshops → guidance/best practice

SIAPWS information

- How to make SIAPWS visible?
 - On-line courses
 - Newsletters – according to mailing list
 - Matarvattensektionen's newsletter (~ 4-5/year)
 - Facebook groups
 - Minutes of EC meetings
 - Adds for arrangements/courses
 - Experiences
 - Updates from IAPWS

Next moves?

- Information
 - How to become more visible?
 - How to engage more colleagues?
- Cooperation with others
 - Matarvattensektionen in new form
 - Finnish VGB is closing down – what to introduce instead – could it be SIAPWS?
 - Danish industry associations for waste incineration and district heating?
 - Should we go for national arrangements (own language, easier travel)?