

# Info fra IAPWS og SIAPWS

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SIAPWS Danmark Generalforsamling  
og Workshop

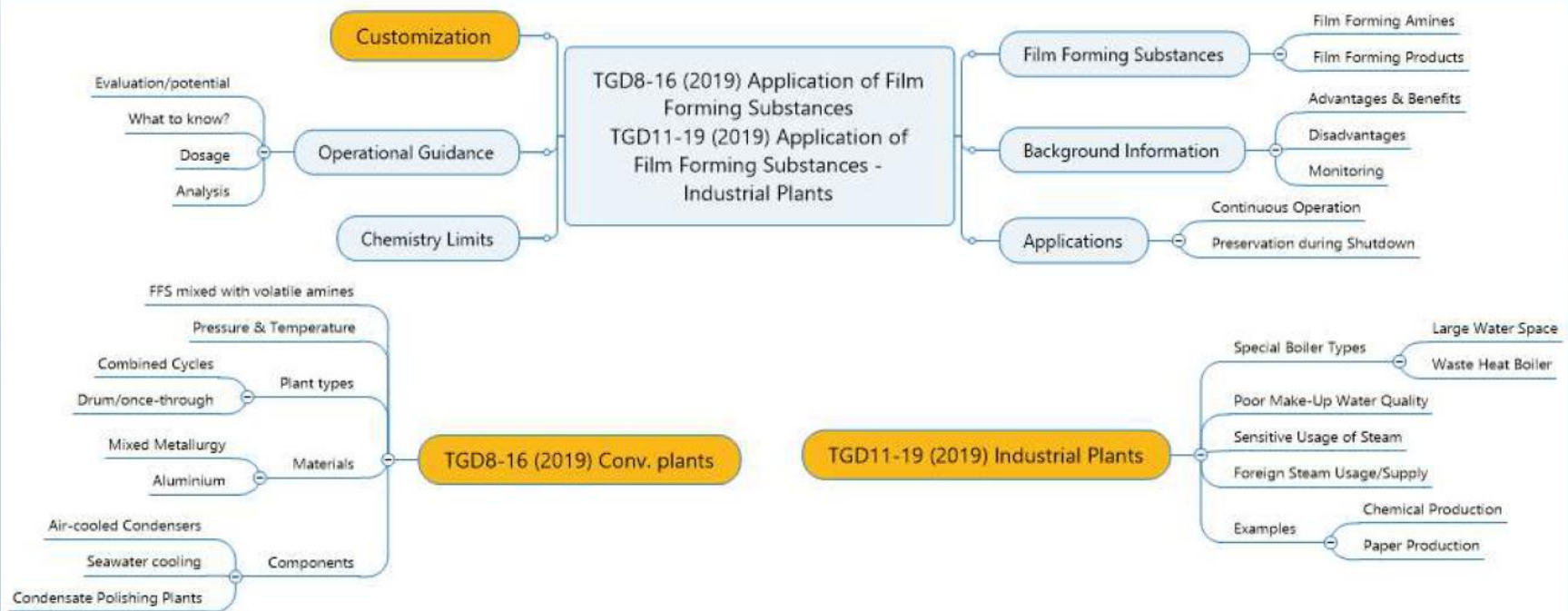
7. Januar 2020



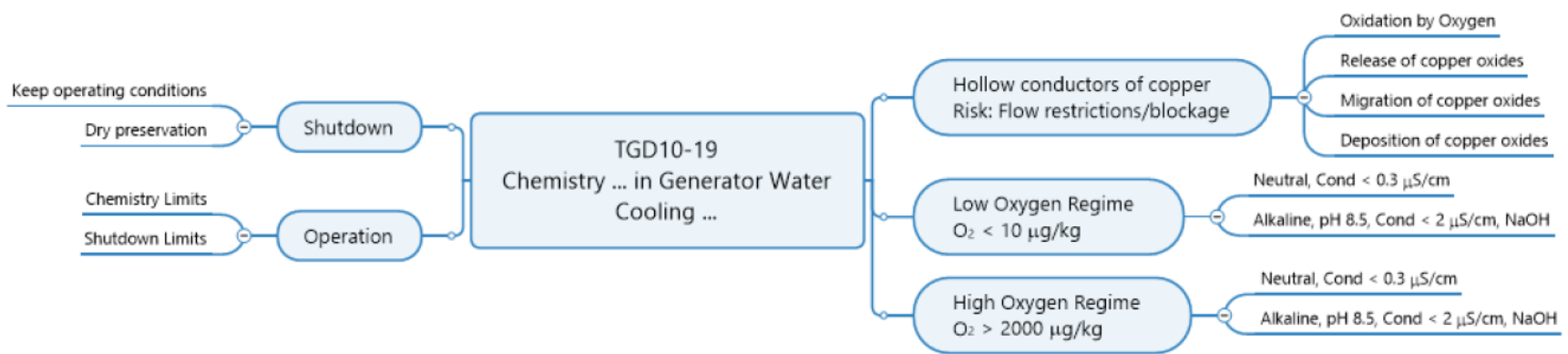
# IAPWS publicerede TDG'er

TGD11-19	<a href="#"><u>Application of Film Forming Substances in Industrial Steam Generators</u></a>
TGD10-19	<a href="#"><u>Chemistry Management in Generator Water Cooling during Operation and Shutdown</u></a>
TGD09-18	<a href="#"><u>Air In-leakage in Steam-Water Cycles</u></a>
TGD08-16 (2019)	<a href="#"><u>Application of Film Forming Substances in Fossil, Combined Cycle, and Biomass Power Plants</u></a>
TGD07-16	<a href="#"><u>HRSO High Pressure Evaporator Sampling for Internal Deposit Identification and Determining the Need to Chemical Clean</u></a>
TGD06-13 (2014)	<a href="#"><u>Corrosion Product Sampling and Analysis for Fossil and Combined Cycle Plants</u></a>
TGD05-13	<a href="#"><u>Steam Purity for Turbine Operation</u></a>
TGD04-11 (2015)	<a href="#"><u>Phosphate and NaOH treatments for the steam-water circuits of drum boilers of fossil and combined cycle/HRSO power plants</u></a>
TGD03-10 (2015)	<a href="#"><u>Volatile treatments for the steam-water circuits of fossil and combined cycle/HRSO power plants</u></a>
TGD02-09 (2015)	<a href="#"><u>Instrumentation for monitoring and control of cycle chemistry for the steam-water circuits of fossil-fired and combined-cycle power plants</u></a>
TGD01-08	<a href="#"><u>Procedures for the Measurement of Carryover of Boiler Water into Steam</u></a>

# TGDs on Film-Forming Substances



# Chemistry Management in Generator Water Cooling during Operation and Shutdown



# Upcoming TGDs

- Sampling and Analysis of Corrosion Products for Flexible Plants
- Treatment of Flue Gas Condensate
- Demin Water Integrity
- Smart Alarms → Extension of the Instrumentation TGD

# Rough Outline of a TGD on FGC treatment

1. Nomenclature and Definitions
2. Introduction and Purpose
3. Background
4. **Review of Flue Gas Cleaning Technology**
  1. Fuel types, flue gas properties
  2. Flue gas cleaning technologies
  3. Flue gas condensing
  4. Lay-out examples
5. **Treatment of condensate**
  1. Purpose (environmental demand, moderate reuse, maximum purity or maximum reuse, moderate quality)
  2. Plant examples showing the most common designs introducing the unit operations
6. **Treatment vs Flue Gas Cleaning Technology**
  1. Simple systems → advanced systems
7. **Design Considerations**
  1. The unit operations involved
  2. Instrumentation recommended for supervision
8. **Operation of FGC Plants**
  1. Condensed operational experiences, troubleshooting
  2. Cleaning in Place of membrane-based components
  3. Monitoring of plant performance
9. **Road Map to Customization**
10. References

Note: This goes on the production of flue gas condensate and the factors determining the quality. It is not on the design of the plants!

## Use of the TGD – foreseen:

- Spreading the technology outside the Nordic Countries
- Building new plants
  - Concept & specification
  - Evaluation of design
  - Planning operation
- Operation
  - Guidance on monitoring
  - Troubleshooting
  - Maintenance

# IAPWS Årsmøde i 2020



THE ITALIAN COMMITTEE IS PLEASED TO INVITE YOU TO

## The 2020 IAPWS Annual Meeting

September 6-11, 2020

Starhotels Majestic, Turin, Italy

If potentially interested, we invite you to [create your own account](#).

In this way we will be able to contact you when meeting registration will be available.

Click [here](#) to download IAPWS 2020 brochure.

IAPWS

INRiM  
ISTITUTO NAZIONALE  
DI RICERCA METROLOGICA

<http://iapws2020.inrim.it/>

# SIAPWS Årsmøde 18.-19. marts 2020

## IDA i København.

Time	Content	Remark
<b>17 March evening</b>	Possible informal EC meeting together with dinner	Depends on travel plans
<b>18 March</b>		
<b>8:00-9:30</b>	EC meeting (Paul McCann as guest possibly)	
<b>9:30-10:00</b>	Coffee and get-together-small-talk	
<b>10:00-12:00</b>	SIAPWS Annual Meeting The formal stuff Information on IAPWS	
<b>12:00-13:00</b>	Lunch	
<b>13:00-15:00</b>	Workshop, session 1 Paul McCann: What we do chemistry-wise in UK & Ireland, BIAPWS Paul McCann: Experiences with FFA at CCGT plants in UK NN1: Application of FFA according to the TGD NN2: FFA at plant X - current considerations	
<b>15:00-15:30</b>	Coffee break	
<b>15:30-17:00</b>	Workshop, session 2 NN3: Bacterial growth in district heating systems - how to detect and react Pilot test of filtration of district heating water ahead of RO - glass filter material may substitute UF Distribution of rinsed FGC through district heating systems - Finnish & Danish experiences NN4: Comparison of guidelines for district heating water in the Nordic countries	
<b>19:00-22:00</b>	SIAPWS dinner for all attendees (self-paid!)	
<b>19 March</b>		
<b>9:00-12:00</b>	Workshop, session 3 NN5 (Calle/Linda): Jordbro experiences with FGC treatment - adaption of plant Henrik Olsson: FGC treatment at AMV4 - design and first experiences Klaus Friberg: The CFB boiler at AMV4 - design, water chemistry, supervision, commissioning NN: Intro to the new CHP at Amagerværket, AMV4, safety rules during visit	
<b>12:00-13:00</b>	Lunch and transfer to Amagerværket	
<b>13:00-15:00</b>	Plant visit at AMV4	Optional point