

# A.N.T. International Academy – Seminar Schedule



Structural Materials Degradation at Palma de Mallorca, Spain — March 6<sup>th</sup>–8<sup>th</sup>, 2019

## Wednesday, March 6<sup>th</sup>:

(09:00–09:30)	Seminar Presentation and Content Review	P. RUDLING F. CATTANT U. ILG
(09:30–10:15)	<b>Various Types of LWRs</b> <i>Part 1:</i> PWRs (FRA, W, CE, B&W, VVERs) <i>Part 2:</i> BWRs	F. CATTANT U. ILG
(10:15–10:45)	LWRs Metallic Materials	F. CATTANT
(10:45–11:15)	<i>Coffee Break</i>	
(11:15–12:15)	Review of Non Destructive Testing Techniques Used in LWRs Inspections	F. CATTANT
(12:15–13:00)	<b>WENRA Reference Levels Issue I:</b> Ageing management – Major Components in PWR and BWR Relevant for Safety	U. ILG
(13:00–14:00)	<i>Lunch</i>	
(14:30–15:30)	<b>Field Experience with PWR Components</b> <i>Part 1:</i> Reactor Pressure Vessel – Vessel, Nozzles/Dissimilar Metal Welds, Top and Bottom Head Penetrations, Control Rods and Control Rod Drive Mechanisms, Upper and Lower Internals	F. CATTANT
(15:30–16:00)	<i>Coffee Break</i>	
(16:00–17:00)	<b>Field Experience with BWR Components and Refurbishing Concepts in Case of Degradation</b> <i>Part 1:</i> Core Shroud, Austenitic Stainless Steel Piping Systems, Ferritic Steel Piping Systems, Nozzles/Dissimilar Welds, Others...	U. ILG
(17:15–18:00)	<b>Field Experience with PWR Components</b> <i>Part 2:</i> Pressuriser: Heaters, Heater Sleeves, Nozzles/Dissimilar Metal Welds, Instrumentation Nozzles	F. CATTANT

## Thursday, March 7<sup>th</sup>:

(09:00–10:00)	<b>Field Experience with PWR Components</b> <i>Part 3:</i> Steam Generator – Nozzles/Dissimilar Metal Welds, Channel Heads, Drains, Tubes Bundle, Sleeves, Plugs, Tube Support Plates	F. CATTANT
(10:00–10:30)	<i>Break</i>	
(10:30–11:30)	<b>Field Experience with BWR Components and Refurbishing Concepts in Case of Degradation</b> <i>Part 2:</i> Core Shroud, Austenitic Stainless Steel Piping Systems, Ferritic Steel Piping Systems, Nozzles/Dissimilar Welds, Others...	U. ILG
(11:30–12:00)	<i>Coffee Break</i>	
(12:00–13:00)	<b>Field Experience with PWR Components</b> <i>Part 4:</i> Reactor Cooling System – Pipes And Elbows, Fitting And Branching, Reactor Coolant Pumps	F. CATTANT
(13:00–14:30)	<i>Lunch</i>	
(14:30–15:30)	<b>Field Experience with BWR Components and Refurbishing Concepts in Case of Degradation</b> <i>Part 3:</i> Core Shroud, Austenitic Stainless Steel Piping Systems, Ferritic Steel Piping Systems, Nozzles/Dissimilar Welds, Others...	U. ILG

(15:30–16:00)	<i>Coffee Break</i>	
(16:00–17:15)	<b>Field Experience With PWR Components</b> <i>Part 5:</i> Systems Attached to the Reactor Cooling System – Chemical and Volumetric Control System, Safety Injection System, Reactor Heat Removal System, Components Cooling System	F. CATTANT
(17:15–18:00)	Integrity Concept for Piping Systems with Corresponding Leak and Break Postulates in German Nuclear Power Plants	U. ILG

**Friday, March 8<sup>th</sup>:**

(09:00–09:30)	<b>Field Experience with BWR Components and Refurbishing Concepts in Case of Degradation</b> <i>Part 4:</i> Core Shroud, Austenitic Stainless Steel Piping Systems, Ferritic Steel Piping Systems, Nozzles/Dissimilar Welds, Others...	U. ILG
(09:30–10:30)	<b>Field Experience with PWR Components</b> <i>Part 6:</i> Balance Of Plant – Turbine, Condenser, Pumps, Dryer/Re-Heaters, Valves	F. CATTANT
(10:30–11:00)	<i>Coffee Break</i>	
(11:00–11:45)	Operational Surveillance and Measures to Maintain Component Performance for Long Time Operation – (PWR/BWR), Part 1	U. ILG
(11:45–12:15)	<i>Break</i>	
(12:15–13:00)	Operational Surveillance and Measures to Maintain Component Performance for Long Time Operation – (PWR/BWR), Part 2	U. ILG
(13:00–14:30)	<i>Lunch</i>	
(14:30–15:30)	Corrosion, Mitigation Techniques	F. CATTANT
(15:30–16:00)	Boric Acid Corrosion	F. CATTANT
(16:00–16:20)	<i>Coffee Break</i>	
(16:20–16:50)	Brittle Fracture Analysis of RPV in Case of PTS	U. ILG
(16:50–17:20)	Degradation by Foreign Objects	F. CATTANT
(17:20–17:50)	Wear Issues	F. CATTANT
(17:50–18:00)	Seminar Conclusion & Feedback	ALL

Please note that the Structural Materials Degradation Seminar starts at **9:00 on March 6<sup>th</sup>** and ends at **18:00 on March 8<sup>th</sup>**.



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