

PROGRAMME - Fracture, Fatigue, Creep & Corrosion, April and September 2019

Monday		Tuesday		Wednesday		Thursday		Friday	
09:00	Introduction of the course / delegates (NL/RAA/RA)	09:00	ECA: Deterministic and probabilistic considerations (NL)	09:00	High Temperature Fitness-for-Service Methods (RAA)	09:00	Corrosion - Introduction & calculations (RA)	09:00	Corrosion Fatigue - Introduction (RA)
09:20	Introduction of the failure of structures and machines (NL)	09:20		09:40	Worked Examples on Creep Crack Growth (RAA)	09:40		09:40	CF Modelling/Mechanisms & Worked example (RA)
09:50	Fundamentals of Fatigue and Fracture mechanisms (NL)	09:50		Material Creep Deformation and Failure Models (RAA)	10:00				
10:40	<i>Coffee break</i>	10:40	<i>Coffee break</i>	10:40	<i>Coffee break</i>	10:50	<i>Coffee break</i>	10:30	<i>Coffee break</i>
11:00	Intro & application of Linear Elastic Fracture Mechanics (NL)	11:00	Creep Stress Analysis of Uncracked Bodies under Steady and Cyclic Loading (RAA)	11:10	Case Studies on High Temperature Fracture (RAA)	11:10	Pipeline corrosion case study (RA)	10:50	Future Trends in High temperature Assessment (RAA)
11:50	<i>Coffee break</i>	11:50	<i>Coffee break</i>	11:50	<i>Coffee break</i>	11:50	<i>Coffee break</i>	11:50	<i>Coffee break</i>
12:00	Elastic-Plastic Fracture Mechanics: When? What for? How? (NL)	12:00	Creep-Fatigue Initiation Assessment (RAA)	12:00	Creep-Fatigue Crack Growth Assessment (RAA)	12:00	Pitting & API assessment (RA)	12:00	<i>End of Course- Question/ Discussions</i>
13:00	<i>Lunch</i>	13:00	<i>Lunch</i>	13:00	<i>Lunch</i>	13:00	<i>Lunch</i>	13:00	<i>Lunch</i>
14:00	Stress and Strain life approaches (NL)	14:00	Creep Fracture Mechanics (RAA)	14:00	Short Cracks in Creep-Fatigue (RAA)	14:00	SCC Introduction/ Mechanisms & Methods of Assessment (RA)	14:00	<i>End of day 5</i>
14:30	Fracture mechanics and fatigue crack propagation (NL)	14:50	Models for Creep Crack Initiation and Growth (RAA)	14:50	Creep- Case Studies (RAA)	15:00			
15:20	<i>Coffee break</i>	15:20	<i>Coffee break</i>	15:20	<i>Coffee break</i>	15:20	<i>Coffee break</i>	15:20	<div style="border: 1px solid black; padding: 5px;"> RAA: Prof. Robert Ainsworth RA: Prof. Robert Akid NL: Dr Nicolas Larrosa </div>
15:40	FEA: Stress analysis and assessment of fracture parameters (NL)	15:40	Residual Stress Effects on Creep Fracture (RAA)	15:40	Advanced Computational Methods for Creep (RAA)	15:40	SCC worked example (RA)	16:00	
17:00	<i>End of day 1</i>	17:00	<i>End of day 2</i>	17:00	<i>End of day 3</i>	17:00	<i>End of day 4</i>	17:00	