

Thursday, April 16th, 2015, Venue: Clyde Williams Building, Loughborough University, Ashby Road		
09:00 Registration		
09:30	Welcome and Introduction to the Workshop Reliability Assessment by Quality Assurance and Service Life Testing	Prof. Bob Alison, Vice-Chancellor and President of Loughborough University/ Prof. Ralph Gottschalg (CREST)/ Dr.-Ing. Michael Koehl (ISE)
10:00 – 11:00 Block 1	INTRODUCTION TO ACCELERATED TESTING	Chair: Michael Koehl, ISE
a)	Requirements for reliability assurance incl. PVQAT	Tony Sample, JRC, IT
b)	Life-time energy yield	Ralph Gottschalg, CREST, UK
11:00 – 11:30 Group Discussion I: <i>Expectations and motivations for this workshop</i>		
Group leaders:	a) Ralph Gottschalg b) Michael Koehl	Room A (Conference Room) Room B
11:30 – 12:00 <i>Coffeebreak</i>		
12:00 – 13:30 Block 2	FROM DEGRADATION FACTOR ASSESSMENT TO TEST CONDITIONS – PART I	Chair: Beate Roeder, HU Berlin
a)	Ultra-violet testing of various back-sheets for PV-modules	Michael Koehl, ISE, GER
b)	Methodology for comparing indoor stress tests to outdoor exposure	Michael Kempe, NREL, USA
c)	Thermomechanics	Matthias Ebert, CSP, GER
13:30 – 14:30 <i>Lunch</i>		
14:30 – 16:00 Block 3	FROM DEGRADATION FACTOR ASSESSMENT TO TEST CONDITIONS – PART II	Chair: John Wohlgemuth, NREL
a)	Outdoor-Measurements of the impact of the weather conditions on the Leakage Current and the Potential Induced Degradation	Michael Koehl, ISE, GER
b)	Stress mapping	Karolina Slamova, ISE, GER
c)	Combined stress testing on PV modules	Karl Berger, AIT, AUT
16:00 – 16:30 Group Discussion II: <i>How can we provide reliable accelerated service life tests?</i>		
Group leaders:	a) Ralph Gottschalg b) Michael Koehl	Room A Room B
16:30 – 17:00 <i>Coffeebreak</i>		
19:00 <i>Shuttle to Conference Dinner</i>		
19:30 – 22:30 <i>Conference Dinner, Venue: Browns Lane Bar and Restaurant</i>		

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08:30 – 10:00 Block 4	OPTICAL METHODS FOR MODULE INSPECTION	Chair: Ralph Gottschalg, CREST
a)	Raman Spectroscopy for Polymer Degradation Analysis	Karl-Anders Weiss, ISE, GER
b)	Luminescence spectroscopy as powerful tool for non-destructive inspection of PV module encapsulants	Beate Roeder, HU Berlin, GER
c)	Quantification of electroluminescence spectroscopy	Karl Bedrich, CREST, UK
10:00 – 10:30	<i>Coffeebreak</i>	
10:30 – 12:00 Block 5	QUALITY ASSURANCE IN PRODUCTION AND OPERATION	Chair: Michael Kempe, NREL
a)	QS system applied in industry production	Norbert Lenk, Consultant, GER
b)	Luminescence as a tool for the spatially resolved evaluation of EVA crosslinking in PV modules	Jan Schlothauer, HU Berlin, GER
c)	Uncertainty of power rating in production	Christos Monokoussos, TUV Rheinland, CN
12:00 – 12:30	Group Discussion III: <i>How comprehensive should be quality assurance?</i>	
Group leaders:	a) Ralph Gottschalg b) Michael Koehl	Room A Room B
12:30 – 13:30	<i>Lunch</i>	
13:30 – 15:00 Block 6	FIELD EXPERIENCE	Chair: Tony Sample, JRC
a)	Financial risk grading of PV power plants using risk priority number (RPN)	Govindasamy Tamizhmani, ASU, USA
b)	Correlation of Field Observations with Type Approval Testing	John Wohlgemuth, NREL, USA
c)	Field experience with PID and methods of prevention	Peter Bentz, Solarfabrik. GER
15:00 -15:30	Plenary discussion With presentation of discussion group results	Gottschalg (CREST)/ Koehl (ISE)
15:30 – 16:00	<i>Coffeebreak</i>	
15:30 – 17:00	VISIT OF CREST FACILITIES (optional)	