

5th International Small Sample Test Techniques Conference

SSTT 2018

10 – 12 July 2018
Swansea University Bay Campus
Wales



Swansea University
Prifysgol Abertawe

MONDAY 9th JULY

18:00

ARRIVAL

19:00

EVENING MEAL - THE CORE

TUESDAY 10th JULY

PLENARY SESSION – CHAIRPERSON - R. HURST

08:45 Welcome

R. Lancaster

08:50 Opening of Plenary Session

R. Hurst

09:00 European Standard on Small Punch Testing of Metallic Materials

M. Bruchhausen

09:25 Determination of Ductile-Brittle Transition Temperatures from the Results of Penetration Tests

K. Matocha

09:50 Numerical Investigation of the Influence of Friction in SPT Experiments

M. Abdendroth

10:15 Current Status of the Small Punch Test Standardisation within the ASTM

R. Kopriva

10:40

BREAK

SMALL SCALE TESTING FOR TENSILE AND FRACTURE BEHAVIOUR OF STEEL – CHAIRPERSON - M. BRUCHHAUSEN

11:00	Successfully Estimating Tensile Strength by Small Punch Testing	<i>S. Holmström</i>
11:20	Effect of Anisotropic Microstructure on the Small Punch Test Transition Temperature in ODS Steels	<i>E. Altstadt</i>
11:40	Tensile Property Evaluation of Japanese Reactor Pressure Vessel Steels by Shear Punch Test Technique	<i>T. Kobayashi</i>
12:00	Interim Results of the Reactor Pressure Vessel Materials Evaluation within the Framework of the Implemented Advanced Surveillance Specimen Programme	<i>M. Kapusnak</i>
12:20	Session Summary Q+A	<i>M. Bruchhausen</i>

12:30 **LUNCH**

ALTERNATIVE MINIATURISED TEST METHODS – CHAIRPERSON - S. JEFFS

13:20	Comparative Study Between Small Punch Test and Hydraulic Bulge Test	<i>H. Wang</i>
13:40	Miniature Creep Tests using Plate Specimens Bonded by Electron Beam Welding	<i>K. Kobayashi</i>
14:00	Determining the Temperature Dependent Fracture Toughness of Carbon-Bonded Alumina using Chevron-Notched Specimens	<i>H. Zielke</i>
14:20	Determination of Plastic Properties using Instrumented Indentation Test with Hybrid Particle Swarm Optimisation	<i>L. Huang</i>
14:40	Session Summary Q+A	<i>S. Jeffs</i>

14:50 **BREAK**

SMALL SCALE TESTING FOR TENSILE AND FRACTURE BEHAVIOUR OF STEEL – CHAIRPERSON - K. MATOCHA

15:10 Small Punch Technique used to Evaluate the Radiation Damage in SS316L Thin Foils due to Proton Bombardment *S. Haroush*

15:30 Using the SPT Method for Estimation of Mechanical Property Changes of RPV Steels after Irradiation in the Halden Reactor *M. Adamech*

15:50 Study on Fracture Toughness with CT Specimens of Different Thickness *S. Fan*

16:10 Environment and Rate Effects on the Estimation of Fracture Toughness by Small Punch Tests in Hydrogen Embrittlement Scenarios *B. Arroyo*

16:30 Session Summary Q+A *K. Matocha*

16:40 **BREAK**

IMPRESSION CREEP – CHAIRPERSON - S. BRETT

17:00 Post-Test Impression Creep Evaluation Methods and Findings for Improved Code of Practice *A. Bridges*

17:20 Potential Implications of Step Loading in Impression Creep Testing *A. Bridges*

17:40 Application of Impression Creep Testing for Measuring Creep Properties of Heat Affected Zones *J. Rantala*

18:00 Session Summary Q+A *S. Brett*

18:10 **CLOSE**

19:00 **EVENING MEAL - THE CORE**

WEDNESDAY 11th JULY

MINIATURISED TENSILE TESTING – CHAIRPERSON - R. LACALLE

08:30	Determination of High Temperature Material Properties from a Two-Material Miniature Tensile Specimen	<i>W. Wen</i>
08:50	Application of Micro-Tensile Test for Material Characterization of Mild Steel DC01	<i>P. Konopik</i>
09:10	The Development of a Novel Small Ring Specimen Tensile Testing Technique	<i>J. Kazakeviciute</i>
09:30	Microscopic Damage Development in S960 Steel through In-Situ Mechanical Testing	<i>R. Dowding</i>
09:50	Session Summary Q+A	<i>R. Lacalle</i>

10:00 **BREAK**

ALTERNATIVE MINIATURISED TEST METHODS – CHAIRPERSON - C. HYDE

10:20	The Research and Development of Small-Invasive Sampling Machine	<i>J. Wang</i>
10:40	304L Stainless Steel Fatigue Evaluation using Dynamic Mechanical Analysis	<i>D. Rao</i>
11:00	Fatigue Performance of a LPBF Nickel Superalloy Assessed via the Small Punch Test	<i>S. Davies</i>
11:20	Fatigue Response Evaluation of Stainless Steel SS304LN and SS316LN Through Cyclic Ball Indentation Studies	<i>R. Prakash</i>
11:40	Fatigue Strength Assessment of SUS316 by Small Bulge Fatigue (SBF) Test	<i>S. Komazaki</i>
12:00	Session Summary Q+A	<i>C. Hyde</i>

12:10 **LUNCH**

SMALL SCALE TESTING OF ADVANCED MATERIALS – CHAIRPERSON - G. BAXTER

13:00	Small Punch Testing of Thermally Sprayed CoNiCrAlY Coatings	<i>H. Chen</i>
13:20	Application of the Small Punch Test to Evaluate the Integrity of a Cold Spray Titanium Coating	<i>A. Wong</i>
13:40	Experimental Investigations on the Failure of a Coating-Substrate Compound by means of the C-Specimen Concept and the Small Punch Test	<i>M. Selent</i>
14:00	High Temperature Mechanical Deformation of an Additively Manufactured Nickel Based Superalloy using Small Scale Test Methods	<i>H. Hilal</i>
14:20	Investigations into Taylor-Quinney Coefficient Determination for a 7000 Series Aluminium Alloy using a Novel Small Specimen Test Technique	<i>J. Rouse</i>
14:40	Session Summary Q+A	<i>G. Baxter</i>

14:50 **BREAK**

SMALL SCALE CREEP – CHAIRPERSON - S. HOLMSTRÖM

15:10	Determination of Creep Properties from Small Punch Test using Experimental Correlation	<i>P. Dymacek</i>
15:30	The Effect of Testing Environment on Small Punch Creep	<i>H. Dawson</i>
15:50	SP Creep Properties of Gr.91 Boiler Pipings Service-Exposed in Different USC Power Plants	<i>S. Komazaki</i>
16:10	Session Summary Q+A	<i>S. Holmström</i>

16:20 **BREAK**

IMPRESSION CREEP – CHAIRPERSON - J. RANTALA

16:40	The Impression Creep Monkman Grant Relationship	<i>S. Brett</i>
17:00	Commercialisation of Impression Creep Testing	<i>T. Gallacher</i>
17:20	Impression Creep Testing for Evaluation of Grade 22 Ex-Service Hot Reheat Piping Seam Weld	<i>A. Bridges</i>

17:40 Session Summary Q+A

J. Rantala

17:50

CLOSE

19:00

COACH DEPARTS BAY CAMPUS

19:15

CONFERENCE DINNER - NATIONAL WATERFRONT MUSEUM

23:00

COACH RETURNS TO BAY CAMPUS

THURSDAY 12th JULY

SMALL SCALE TESTING FOR TENSILE AND FRACTURE BEHAVIOUR OF STEEL – CHAIRPERSON - E. ALTSTADT

09:00	Evaluation of Ductile-brittle Transition Temperature of Anisotropy Material by Small Punch Test with U-shaped Notch	<i>K. Guan</i>
09:20	Numerical Investigations of Small Punch Tests for Determining Tensile Properties	<i>M. Kamaya</i>
09:40	Analysis of the Actual Methods used for the Yield Strength Correlation in the Small Punch Test and the Development of an Improved Prediction Method for Steel Alloys	<i>J. Calaf Chica</i>
10:00	Characterisation of the Transition Region by means of Small Punch Notched Specimens	<i>D. Andres</i>
10:20	Session Summary Q+A	<i>E. Altstadt</i>

10:30 **BREAK**

SMALL SCALE CREEP – CHAIRPERSON - M. ABENDROTH

10:50	FE Modelling of Small Punch Creep Test using Kocks-Mecking-Estrin Visco-Plasticity Model	<i>H. Al-Abedy</i>
11:10	Procedure of SPC data treatment for “Uniaxial test correlation”	<i>Y. Li</i>
11:30	Small Ring Testing of a Creep Resistant Material	<i>C. Hyde</i>
11:50	Session Summary Q+A	<i>M. Abendroth</i>

12:00 **LUNCH**

SMALL SCALE TESTING METHODOLOGIES AND STANDARDISATION – CHAIRPERSON - R. HURST

13:00 Industrial Applications of Small Punch Test

P. Čížek

13:20 Considerations for the Accreditation of Small Punch Creep Testing

A. Jones

13:40 The Role of Punch Eccentricity in Small Punch Testing

F. Sebek

14:00 Temperature Measurement and Calibration in SP Testing Machines and Equipment

D. Omacht

14:20 Session Summary Q+A

R. Hurst

14:30

CLOSING REMARKS

14:40

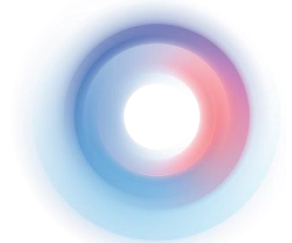
OPTIONAL LAB TOUR

15:30

CLOSE OF CONFERENCE



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