

# ESIS TC11

## HIGH TEMPERATURE MECHANICAL TESTING COMMITTEE

### Annual General Meeting

### Minutes of 57<sup>th</sup> Committee Meeting,

Held on Tuesday 20<sup>th</sup> April 2010 held in conjunction with a meeting on

'High Temperature Mechanical Testing in Controlled Environments', at SERCO, Risley, UK.

The meeting will be held in the Coniston Room, in Walton House at **Serco Technical Services** Risley, Warrington, WA3 6GA.

#### Dates of Next Meetings :

- 58<sup>th</sup> Meeting : **Tuesday 2<sup>nd</sup> November 2010** : *Siemens Energy, Lincoln.*

**[ Please Note the Revised Date ]**

[ To be held in conjunction with a meeting of the Temperature Measurement Working Group]

- 59<sup>th</sup> Meeting ( AGM ) – **Wednesday 11<sup>th</sup> May 2011, Berlin**

[ To be held in conjunction with 2<sup>nd</sup> International Workshop on Thermo-Mechanical Fatigue BAM, Berlin on 12<sup>th</sup> & 13<sup>th</sup> May 2011 ]

<u>Item</u>	<u>Topic</u>	<u>Action</u>
1	<p><b><u>INTRODUCTION &amp; WELCOME</u></b></p> <p><b>1.1 General.</b> Dr Andrew Wisbey welcomed the Committee to SERCO and outlined the necessary safety arrangements.</p> <p><b>1.2</b> Because the Chairman, Mr P McCarthy, was unable to be present and had sent his apologies, the Committee agreed to the Vice Chairman, Dr Hellmuth Klingelhofer, chairing the meeting.</p> <p><b>1.3</b> The Committee congratulated Dr Klingelhöffer in his heroic journey to attend the meeting, travelling 18 hours by train from Berlin, since European airspace was closed to all flights due to volcanic ash in the atmosphere from the eruption of a volcano in Iceland. Other members unable to attend due to cancelled flights included Prof. Roger Hurst ( Petten, NL) and Larry Candler, stranded in Tolouse, France.</p>	
2	<p><b><u>ATTENDANCE &amp; APOLOGIES FOR ABSENCE</u></b></p> <p>The business cards of the members present and observers together with a list of apologies received / attendance record are given in <b>Appendix 1 &amp; 2.</b></p> <p>The following were present: Dr H Klingelhöffer (<i>Chairman</i>), Miss Kate Abbott, Prof. M Bache, Dr Peter Barnard, Mr Steve Collins, Philip G Jones, Mr M S Loveday (<i>Secretary</i>), &amp; Mr O. O'Grady .</p> <p>Also attending were: Andrew Mills (Siemens), Johnathan Snell (Instron), Andrew Wisbey (Serco )</p>	
3	<p><b><u>MINUTES OF PREVIOUS MEETING</u></b></p> <p>The Minutes of the 56<sup>th</sup> meeting held on Tuesday 27<sup>th</sup> October 2009 at Doosan- Babcock having previously been distributed via E-mail, were accepted as a corrected record with the following minor amendments : a) The Establishment of a WG on Testing in Controlled Environments should have been noted with Owen O'Grady as Convenor,</p>	

4	<p><b><u>MATTERS ARISING</u></b> (<i>Items not covered elsewhere on the Agenda</i>)</p> <p><b><u>4.1. HTMTC Web site-</u></b> now available <a href="http://www.htmtc.com">www.htmtc.com</a> . Some of the items will need to be updated, including affiliations of some members. Information will be forwarded Phil Jones, the webmaster.</p>	MSL/ PJ
5	<p><b><u>CORRESPONDENCE</u></b></p> <p><b>Charity Commission, Companies House</b></p> <p>The Secretary confirmed that the Annual accounts and the Chairman’s report had been sent to Companies House in September by recorded delivery with an SAE for an acknowledgement. Since no reply was received, possibly due to the postal strike, e-mail contact was established and Companies House have now confirmed receipt by the 5<sup>th</sup> September 2009. The on-line return was submitted to the Charity Commission by the Secretary with details from the audited accounts. See the Charity Commission new website : <a href="http://www.charitycommission.gov.uk">www.charitycommission.gov.uk</a></p>	
6	<p><b>CHAIRMAN'S REPORT</b></p> <p>The Chairman’s report, written by Mr McCarthy had been circulated to the Committee prior to the meeting and a copy is given in <b>Appendix 3</b> and based on the report the Secretary had prepared some slides to illustrate the achievements of the HTMTC during the last year, the presentation may be viewed on the HTMTC Website. The Report was accepted by the Committee and will be forwarded to Companies House together with the Accounts.</p>	MSL/ PGJ  MSL
7	<p><b>TREASURER'S REPORT / Approval of Accounts</b></p> <p>The treasurer, Dr Peter Barnard, had tabled copies of the annual accounts. The expenditure in 2009 was £2,308 (£5,531) and the income was £6 (£244)—(<i>The figures for 2008 are shown in brackets</i>), resulting in a net loss for the year of £2,302 (£5,287). It was noted that the only income was provided by interest on balance in the bank account, which was substantially lower due to reduced bank interest rates. In addition no royalties had been received from book sales and likewise no seminars had been held in 2009. The main expenditure was associated with Administrative expenses, Secretarial services and Website charges.</p> <p>The accounts had been scrutinised by Nick Green, the Independent Examiner, and the books had been collected from him by the Secretary on the previous Saturday, Adoption of the accounts was proposed by Steve Collins, seconded by Kate Abbott and accepted <i>nem con</i>. Copies of the full accounts for 2009 signed by the Examiner, Treasurer, &amp; Vice Chairman They will forwarded to Chairman ( P McCarthy) signature and returned to the Secretary for dispatch to Companies House &amp; and a return submitted to the Charities Commission.</p> <p>Dr Barnard showed bar-charts illustrating the balances in the HTMTC account over the last several years.</p> <p>As agreed at the previous AGM the Treasurer had established a Euro Bank Account so that fees paid by delegates from mainland Europe for HTMTC Conferences would not be subject to punitive bank conversion rate charges.</p> <p>In addition the Treasurer had spent a considerable time liaising with Barclays Bank so that the Committee could hold a ‘chip &amp; pin’ card to allow internet banking. In addition a Pay-Pal account was set up in Feb 2010 and has been the main method of payment for the HTMET workshop.</p> <p>Arrangement will be made to change the authorised signatures on the account to a) Hellmuth Klingehoffer, Larry Candler and Peter Barnard. At present cheques are required to be signed by at least two of the above however banks are planning to abandon</p>	PB  MSL

	<p>conventional paper cheques so an alternative provision may needed to be considered and for regular payments Standing Orders could be set up.</p> <p>The financial implications of the 13 late cancellations of registrants for the Testing in Controlled Environments Workshop, mainly due to cancelled air flights due to volcanic ash were considered. It was agreed that vouchers would be offered up to £95 against the registration fee for a future HTMTC Conference. If the fee had been paid from an individual's personal account and could not be claimed either on insurance or from an employer, then the Treasurer was empowered to offer appropriate compensation.</p> <p>The Treasure gave forward notice that he would wish to stand down as Treasurer in due course, possibly next year.</p> <p>A vote of thanks was passed to Dr Barnard for all the time he had spent in keeping the accounts in good order and for the protracted negotiations with the bank.</p>	
8	<p><b>ELECTION OF COMMITTEE (COUNCIL) MEMBERS</b></p> <p><b><u>a) Elections</u></b></p> <p>The <b>formal membership</b> as a Council Member of the following expired at the AGM: Dr Peter Barnard (<i>Doosan-Babcock Energy, Birmingham</i>), Prof Martin Bache (<i>University of Wales, Swansea</i>), Mr Paul R. McCarthy (<i>Consultant, Crawley</i>) &amp; Dr Peter Morris (<i>CORUS, Rotherham</i>), since in accordance with the with the Minutes of the 15th Meeting of the Committee held on 18th October 1988, their membership came up for re-election on a rolling three year cycle. It was noted that apologies had been received from Dr Morris who hoped he would be able to attend more regularly. The above members were proposed <i>en bloc</i> by Phil Jones and seconded by Owen O'Grady and carried <i>nem con</i>.</p> <p><b><u>b) Resignations</u></b></p> <p><b>i)</b> The Secretary read the communication from Neil Clarke, <i>Rolls Royce</i>, who was standing down from the main committee, but wished to continue as a Corresponding Member because he was now longer closely involve with hands –on testing since nearly all of Rolls Royce testing was now undertaken at Dahlawitz, near Berlin, Germany. A letter of thanks would be sent to Neil Clarke and enquiries would be made for a successor to represent RR, possibly Barry Ward.</p> <p><b>ii)</b> Prof Roger Hurst, <i>IE-JRC, Petten</i>, had given notice that he would be standing down pending retirement. The secretary had procured a suitable bottle of lubrication which it was hope to present to Prof Hurst for his loyal service to the HTMTC since 1988 during which time he had been actively involved with running seminars and producing Codes of Practice on behalf of the HTMTC. A letter of thanks will be sent to Prof Hurst and Prof M Bache subsequently agreed to ensure that the gift was passed to Prof Hurst.</p> <p><b><u>c) Other Changes in Membership:</u></b></p> <p><b><u>1) New Members</u></b></p> <p>i) In accordance with the previous minutes, contact will be made with Bill Mitten, QinetiQ to determine if a representative would like to join the committee.</p> <p>ii) Contact will be made with NPL to see if a suitable representative could join the committee.</p> <p><b><u>ii) Changes in contact details</u></b></p> <p>No changes in contact details had forwarded to the Secretary</p> <p><b><u>d) List of Officers &amp; Committee</u></b></p> <p>The Secretary mentioned that he had prepared a complete list of Officers and committee which had been circulated by e-mail and requested that the entries should checked and</p>	<p>HK</p> <p>HK/ MSL</p> <p>MB</p> <p>MSL</p> <p>MSL</p> <p>All</p>

	any amendments be forwarded. A copy will be lodged on the HTMTC web-site in due course.	
9	<p><b>ELECTION OF OFFICERS</b>  Nominations were given for the following positions:</p> <p><b><u>Chairman</u></b> : <b>Dr Hellmuth Klingelhofer (BAM)</b>  Proposer: Mr Paul McCarthy  Seconder: Dr Peter Barnard</p> <p><b><u>Vice Chairman</u></b> : <b>Mr Larry Candler (Exova)</b>  Proposer: Peter Barnard  Seconder: Hellmuth Klingelhofer</p> <p>The Secretary agreed to write to Mr Candler to notify him of his appointment</p> <p><b><u>Treasurer</u></b> : <b>Dr Peter Barnard (Doosan Babcock)</b>  Proposer: Hellmuth Klingelhofer  Seconder: Kate Abbott</p> <p>All the above Officers were elected <i>nem con.</i></p> <p>The former Chairman, Paul McCarthy had indicated prior to the meeting that he would be standing down as Chairman but would be willing to continue to serve on the Committee. Mr McCarthy had been Chairman since 2004 and the Committee agreed that the new Chairman would write to Mr McCarthy to thank him for his services. In addition the Treasurer would make inquiries as to what would be an acceptable memento in recognition of Mr McCarthy's significant contribution to the well being of the HTMTC during period as Chairman.</p>	MSL        HK PB
10	<p><b>APPOINTMENT OF SECRETARY</b>  Mr Malcolm Loveday accepted the appointment of the post of Secretary of the HTMTC for a further year.</p>	
11	<p><b>APPOINTMENT OF INDEPENDENT EXAMINER</b>  The Present examiner is Mr Nick Green was re-appointed.  The Secretary agreed to deliver a token of appreciation to Mr Green for reviewing the accounts.</p>	
12	<p><b><u>FUTURE HTMTC SEMINARS / WORKSHOPS</u></b></p> <p><b><u>12.1 2<sup>nd</sup> International Workshop on Thermo-Mechanical Fatigue</u></b>  Dr Klingelhofer reported that plans are progressing well for the TMF Workshop which will be held on Thursday &amp; Friday 12<sup>th</sup> &amp; 13<sup>th</sup> May 2011 at BAM Berlin; see <a href="http://www.tmf-workshop.bam.de">www.tmf-workshop.bam.de</a>  Copies of the 2<sup>nd</sup> flyer were tabled and will be circulated. . The registration fee would be €250. A dedicated website has been established for the meeting with links to/from the HTMTC &amp; ESIS Websites. Since the topic is TMF it would be appropriate that most of the papers should be published in the ESIS preferred journal 'International Journal of Fatigue' however some might also be submitted to 'Materials at High Temperatures' thus widening the publicity for the event. The Committee thanked Dr Klingelhofer and BAM for organising the event.  <i>Note: The HTMTC AGM 2011 will be held in conjunction with this meeting in Berlin and will be held on the afternoon of Wednesday 11<sup>th</sup> May 2011 starting at 2.30pm.</i></p> <p><b><u>12.2 High Temperature Mechanical Testing in Controlled Environments</u></b>  Phil Jones, on behalf of the organising committee confirmed that originally 64 people had registered but there had been 13 cancellations mainly due to travel difficulties nevertheless it was hoped that the Workshop would still break even depending upon the charges for refreshments. The registration fee was £95 reduced to £60 for presenting</p>	

	<p>authors. Delegates were being provided with a booklet of extended Abstracts and will be sent a CD with the presentations after the event.</p> <p>The Chairman expressed the committee's thanks especially to Mike Lynch and Mrs Berni Bradley for handling all the local arrangements and to all the other members of the organising committee ( Peter Barnard, Phil Jones &amp; Owen O'Grady) for arranging the Workshop. The Committee looked forward to an interesting 2 day Workshop.</p> <p><b><u>12.3 Quality Assurance Issues for High Temperature Testing</u></b></p> <p>Mr O'Grady reported that Mr McCarthy had circulated some draft notes at the beginning of April to the other members of the steering group ( KA, LC, HK, MSL, OO'G) based on the discussions held at the Doosan- Babcock meeting. Unfortunately a draft programme and flyer had not yet been prepared and it was clearly too late for the meeting to be held in October 2010 as originally suggested, however the Committee still felt that topic clearly merited two 1½ day meetings spaced at approximately 6 months apart. It was proposed that the Part I should be held in the Autumn of 2011 at INCOTEST, Hereford ( venue to be confirmed &amp; hotel list to be prepared) and Part II in Spring 2012 in conjunction with the HTMTC AGM, at a venue to be decided. All the Steering Group were asked to review Paul McCarthy's notes and circulate comments before the end of May and to map out a programme. A flyer should be drafted by the end of June for circulation for comment to the main HTMTC, with a view to issuing it publically by the end of September 2010.</p> <p><b><u>12.4 Other Future Meetings</u></b></p> <p>The Secretary drew attention to the list of additional forthcoming meeting ( <b>Appendix 4</b>) that may be of interest to HTMTC members. Special attention was drawn to</p> <p>a) b) 10<sup>th</sup> International Fatigue Congress <b>FATIGUE 2010</b>, Prague, June 2010 ; c) ASTM – EPRI International Conference on Creep-Fatigue Interaction, CFI-2010, San Antonio Texas, November 2010</p>	<p>KA, LC, HK, MSL, PMcC OO'G</p> <p>SC</p>
13	<p><b><u>WORKING PARTY REPORTS</u></b></p> <p><b><u>13.1 Temperature Measurement Working Group ( Convenor: Malcolm Loveday)</u></b></p> <p>The Convenor, Malcolm Loveday, reported that the 7<sup>th</sup> meeting of the WG was held following the HTMTC meeting at Doosan-Babcock and the Notes were circulated with the minutes of the meeting together with the revised Bibliography and the Draft CoP on Temperature Measurement for additional publications to be added, however as yet no further papers had been added to the list, so it would be circulated again for review and additions. A concern had been raised about the reproducibility of thermocouple calibrations and Dr Wisbey gave a presentation that outlined the problem and suggested that an inter- comparison calibration exercise should be undertaken; the presentation may be viewed on the HTMTC website. The Committee agreed that it was of crucial importance to investigate the matter further and a detailed testing schedule would be drafted. Several members indicated that they would wish to participate in an investigation. During the evening, after the <i>Testing in Controlled Environment</i> Workshop, several members of the WG drafted a proposed inter-comparison schedule for circulation to WG and participants with a view to obtaining data prior the next meeting of the WG on the morning of Tuesday 2<sup>nd</sup> November 2010 at <i>Siemens Energy, Lincoln</i>. The schedule will be circulated and updated.</p> <p>It is intended to hold an open meeting on the topic of Temperature Measurement for Mechanical Testing when the CoP is ready for publication, probably in Autumn 2012.</p> <p><b><u>13.2 Testing of Welds ( Convenor : Prof. Bilal Dogan)</u></b></p> <p>The WG had not met for approximately two years but activities have been pursued via the Int. Inst of Welding (IIW) and VAMAS Technical Committees TWA 31 which is running a round robin on the testing welded specimens in collaboration with the Weldment Working Group.</p> <p><b><u>13.3 Crack Initiation&amp; Measurement ( Convenor:Prof. Kamran Nikbin)</u></b></p> <p>The Secretary reported that although the WG had not been convened during the last year, Prof Nikbin had reported that BS7910 Part 9 on Creep Crack Growth was being updated and that he was attending the relevant BSI Committee meeting today, hence he was unable</p>	<p>All</p> <p>AW / MSL</p>

	to attend the HTMTC AGM. In addition he had forwarded a copy of the ASTM Standard on Creep / fatigue Testing which is now out for balloting. Other activities are being progressed via the VAMAS TWA 31.	
14	<p><b><u>ESIS MATTERS</u></b></p> <p><i>Under a Memorandum of Understanding the HTMTC acts as Technical Committee 11 ( TC11) of the European Structural Integrity Society (ESIS).</i> It was reported that the Secretary will forward the Chairman’s Report for 2009 to ESIS for publication in the ESIS Newsletter , together with a brief of the AGM which will then be found on the ESIS Website: <a href="http://www.structuralintegrity.eu">www.structuralintegrity.eu</a> .</p> <p>Personal Membership of ESIS is €30. UK Members can pay £30 via FESI which gives joint membership to ESIS &amp; FESI (Forum for Engineering Structural Integrity), see <a href="http://www.fesi.org.uk">www.fesi.org.uk</a> .</p> <p><b>It was noted that the EIGHTEENTH EUROPEAN CONFERENCE ON FRACTURE-ECF18 will be held in Dresden, Germany, on 31<sup>st</sup> August -3<sup>rd</sup> September 2010.</b></p>	
15	<p><b><u>STANDARDS ACTIVITIES</u></b></p> <p><b><u>15.1 ISO TC 164 Mechanical Testing of Metals</u></b></p> <p>A detailed report of the outcome of the ISO TC164 meeting held in Tskuba, Japan was given at the previous meeting; since that time Mr McCarthy had revised ISO 9513 Calibration of Extensometers which was now being circulated. Uncertainty issues had been discussed and the various Sub Committees had nominated Technical experts to serve on the TC164 Chairman’s Ad Hoc Group; the Chairman of ISO TC 164 had invited Mr Loveday to act as the Convenor of the Group.</p> <p>The next meetings of ISO TC164 will be held on 19th – 24th September 2010 at NIST, Bolder, Colorado, USA.</p> <p><b><u>15.2 DIN Standards Fatigue Committee</u></b></p> <p>The Chairman reported that DIN was in the process of reforming the German Standards Committee for Fatigue testing and that he was returning the following day in order to attend the first meeting of the new committee. In principle there should now be enough European countries to enable the new series of ISO Standards to be adopted as ISO EN standards.</p> <p><i>Note: Dr Klingelhöffer notified the Secretary that at the DIN Fatigue Committee he had been appointed as the Chairman of the new committee.</i></p>	
16	<p><b><u>CEN TWA on Ontologies &amp; Schema</u></b></p> <p>Mr Loveday gave an update about the CEN Technical Workshop Agreement ( TWA) on Economics and Logistics of Standards Compliant Schemas and Ontologies for Interoperability of Engineering Materials Data. ( WS/ ELISS-EMD) . He reported that the Tensile Testing Standard, ISO 6892 Pt 1 is being used as a pilot example for the addition of an Annexes with Ontologies ( ie Computer compatible data formats for results). The Draft of the Final CWA is now published for public comment and should be finalised at the 3<sup>rd</sup> Workshop held at CEN, Brussels to be held on 27<sup>th</sup> May 2010.</p>	
17	<p><b><u>ANY OTHER BUSINESS</u></b></p> <p><b><u>18.1 E-mail address</u></b></p> <p>The Secretary highlighted the need to establish an HTMTC e-mail account hosted on an independent server, since commercial companies were now starting to close down personal e-mail accounts hosted on their own servers when staff retired or resigned. It was</p>	

	<p>agreed that a new account would be set up, possibly hosted on the same server as the HTMTC Web site, so that all the existing HTMTC correspondence could be transferred.</p> <p><b><u>17.2 Promotional ‘Goodies’.</u></b></p> <p>It had been suggested that it might be useful to have a stock of suitable items emblazoned with the HTMTC logo and website address for distribution to delegates at Workshops. The matter would be investigated by Peter Barnard</p> <p><b><u>17.3 Venues of Meetings &amp; HTMTC Aims Leaflet</u></b></p> <p>The Secretary reported that he will update the list of HTMTC meeting venues and the Aims Leaflet with the List of Main Committee Members for 2010 / 2011, ( see Appendix 5 &amp; 6 )</p>	
<b>18</b>	<p><b><u>CLOSE OF MEETING</u></b></p> <p>The Chairman gave a vote of thanks on behalf of the Committee to SERCO for hosting the meeting.</p> <p>The meeting was followed by the Workshop on Testing in Controlled Environments, which included a visit around the high temperature testing facilities.</p>	
<b>19</b>	<p><b><u>LIST OF APPENDICIES</u></b></p> <ol style="list-style-type: none"> <li>1. Business cards, SERCO Committee Meeting</li> <li>2. Apologies &amp; Attendance Record</li> <li>3. Chairman’s Report</li> <li>4. List of Forthcoming meetings</li> <li>5. List of venues of HTMTC Meetings</li> <li>6. Aims &amp; Membership Leaflet – 2010/2011</li> </ol>	

Secretary Contact Details: [malcolm.loveday#npl.co.uk](mailto:malcolm.loveday#npl.co.uk) [ Note; replace # by @ in e-mail address ; this avoids the given address being picked up by spam search engines ]

**APPENDIX 1 Business Cards**

**57<sup>th</sup> HTMTC Meeting at SERCO, Risley, Warrington.**  
**Tuesday 20<sup>th</sup> April 2010**



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 and Testing

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Also in attendance:  
(Business cards not supplied)

## APPENDIX 2

	Members 2009-10		50 <sup>th</sup> Meet Berlin	51 <sup>st</sup> Meeting QinetiQ	52nd Meeting Imperial	53 <sup>rd</sup> Meeting Petten	54 <sup>th</sup> Meeting Barnwood	55 <sup>th</sup> Meeting Zurich	56 <sup>th</sup> Meeting Doosan Birmingham	57 <sup>th</sup> Meeting Apologies	57 <sup>th</sup> Meeting Apologies
			Sept 05	April 06	April 07	April 08	Nov 08	April 09	Oct 2009	April 2010	April 2010
			<i>Attend</i>	<i>Attend</i>	<i>Attend</i>	<i>Attend</i>	<i>Attend</i>	<i>Attend</i>	<i>Attend</i>	<i>Attend</i>	<i>Apolo</i>
<b>Chairman</b>	Mr P. McCarthy	Consultant		✓	✓	✓	✓	✓	✓		A
<b>Vice-Chairman</b>	Dr H. Klingelhofer	BAM, Berlin, Germany	✓	✓	✓	✓	✓	✓	✓	✓	
<b>Secretary:</b>	Mr M. S. Loveday	Beta Technology ( NPL) UK	✓	✓	✓	✓	✓	✓	✓	✓	
<b>Treasurer</b>	Dr Peter Barnard	Doosan-Babcock, Birmingham, UK		✓	✓	--	Ap	✓	✓	✓	
<b>Council Members</b>											
	Miss Kate Abbott	Siemens Ltd, UK	-	-	-	-	-		* ✓	✓ 20/03/2010	
	Mr Colin Austin	Serco, Risley, UK	--	✓	✓	--	Ap	Ap	Ap	✓ 12/04/2010	
	Prof. M Bache	Univ. Swansea, UK	--	--	--	--	✓	✓	✓	✓ 19/03/2010	
	Mr Carl Barrett	UKAS					Ap	Ap	Ap		A 19/03/
	Mr L. Candler	Exova, UK			Ap	--	✓	Ap	✓	✓ 8/04/2010	
	Mr. N. Clarke	Rolls Royce, Derby, UK	✓		✓	--		Ap	Ap		Ap/ Res 12/04/20
	Mr. S. Collins	INCO, Hereford, UK			x	--		Ap	Ap	✓ 13/04/2010	
	Prof. B. Dogan	EPRI, USA		✓	Ap	--	Ap	✓	Ap		A (19/03/
	Dr. P Häehner	IE-JRC Petten, NL	✓		✓	--			Ap		A ( via R I
	Prof. R. C. Hurst	JRC-IE, Petten, NL		✓	Ap	✓			Ap		A 20/03/
	Dr S Holdsworth	EPMA, Zurich , CZ	-	-	-	-	-	* ✓	Ap		A 20/03/
	Philip G Jones	Alstom		✓	Ap	✓	Ap	✓	Ap	✓ 12/04/2010	
	Mr I McEnteggart	INSTRON		✓	✓	--	Ap	Ap	✓		Ap 12/04/
	Dr P. Morris	CORUS, Rotherham, UK			Ap	--	Ap	Ap	Ap		A 19/03/
	Prof K Nikbin	Imperial College, London, UK	--	✓	✓	--	✓	Ap	Ap		Ap 12/04/
	Mr O. O'Grady	Exova, UK		✓	✓	✓	✓	✓	✓	✓ 12/04/2010	
	Dr M Spindler	British Energy				--*	✓	✓	Ap		A 19/03/

Ap = Apology given : **Also in attendance** : Andrew Wisbey (Serco ), Andrew Mills ( Siemens) & Jonathan Snell ( Instron)

## APPENDIX 3.



# HIGH TEMPERATURE MECHANICAL TESTING COMMITTEE (ESIS TC11)

Company Registration No 02149907

Registered Charity 800892

## ***CHAIRMAN'S REPORT 2009 / 2010*** ***Prepared on behalf of the Executive Committee***

**Presented at the AGM held at Serco Assurance, Warrington, UK on Tuesday,  
20<sup>th</sup> April 2010.**

### **1. Introduction**

The Committee has continued to be active throughout the past year. Two meetings have been held, working group activity continues and plans developed for future activities / meetings of the committee.

Further information about the HTMTC may be found on the web-site at [www.htmtc.com](http://www.htmtc.com)

### **2 General Activities**

#### **2.1 European Structural Integrity Society (ESIS)**

The High Temperature Mechanical Testing Committee (HTMTC) operates as Technical Committee 11 (TC11) of ESIS, whilst retaining its status as a UK Charity and a Company Limited by Guarantee. Contact with ESIS has continued and the activities of the HTMTC have been published in the ESIS Newsletter, see [www.structuralintegrity.eu](http://www.structuralintegrity.eu).

#### **2.2 Conferences and Seminars**

During 2009-10 no formal conferences or seminars were held.

Committee effort during 2009-10 has focussed upon events for the next two years. The first of these will be a meeting on ***High Temperature Mechanical Testing in Controlled Environments***, co-ordinated by Phil Jones and Mike Lynch, to be held on 20<sup>th</sup> and 21<sup>st</sup> April 2010. The steering group, plus organisational support staff from Serco Assurance, have put significant effort into its organisation and the success of this workshop will be due to their hard work.

The second event, co-ordinated by Dr. Hellmuth Klingelhöffer, is the ***2<sup>nd</sup> International Workshop on Thermo-Mechanical Fatigue***, to be held on 12<sup>th</sup> and 13<sup>th</sup> May 2011, at BAM Federal Institute for Materials Research and Testing, Berlin, Germany. A third event, addressing Quality Assurance Issues for High Temperature Testing, is planned for later in 2011.

In addition to the above, individual members have continued to participate in several very successful testing related meetings outside the HTMTC umbrella, and have been heavily involved in the development of new ISO Standards on mechanical testing.

#### **2.3 Publications**

Publications by the Committee during the year have been limited during 2009/10; no activities being undertaken under the HTMTC umbrella have progressed to the publication stage.

## **2.4 Working Groups**

During the year the following Working Group activity has taken place:

- Although the Testing of Weldments Working Group, under the chairmanship of Prof. B. Dogan, has not met during the past year, its Code of Practice on Testing of Weldments is making progress towards becoming an ISO Standard. The subject has also been taken up by International Institute of Welding (IIW) Select Committee Standards (SC STAND).
- The Temperature Measurement Working Group, under the Chairmanship of Mr Malcolm Loveday, continues to explore novel temperature measurement techniques, such as an in-situ calibration method exploiting phase changes to define thermal fixed points. Work on developing a code of practice continues.
- The Miniature Testing group is maintaining a watching brief on developments in this field and, when the situation is appropriate, will expand its activities.
- The Crack Initiation Group, under the chairmanship of Prof Kamran Nikbin (Imperial College), has progressed its work in this area within ASTM, VAMAS and the European Project CRETE:
  - a) The collaboration in VAMAS TWA25- Component Testing – has produced a final version of the ISO/TTA\* 5 - ‘Code of Practice for Creep/Fatigue testing of Cracked Components’.
  - b) VAMAS TWA31 –Weldments - is continuing to discuss crack initiation in welds and HAZ. A small meeting was held in conjunction with Welds 2009, in Florida in June 2009.
  - c) The EU project ‘CREETE’ has been completed and the results are incorporated in to the ISO/TTA 5

## **2.5 Related Activities**

- Members of the committee have contributed to a number of national, European and International Standards committees during the year. Work has now come to fruition on the preparation of a new ISO Standard on TMF Testing (Dr. Klingelhöffer, Dr Hähner & Mr Loveday) and the revision of the ISO & ECISS Tensile Testing Standards (Dr. Klingelhöffer, Mr Loveday & Dr Peter Morris). ISO 204 – Creep Testing – is now published has involved both Mr. Loveday and Mr. McCarthy; and revision of the ISO Extensometer verification standard is proceeding (Mr McCarthy, Mr Loveday, Mr McEntegart).

## **2.5 Main Committee Meetings**

The main committee met twice during 2009/10. The first meeting was the AGM held on Friday 24<sup>th</sup> April 2009 at EMPA, Dubendorf, Switzerland; the second was at Doosan Babcock, Tipton, UK on Tuesday, 27<sup>th</sup> October 2009. The minutes and ancillary papers from these meetings have been circulated to all members.

## **3. Membership**

The main committee currently comprises 19 members, including 4 from mainland Europe, with representatives from Industry, Research Organisations and Universities. In addition there are approximately 75 further participants on the Corresponding Members mailing list.

At the AGM April 2009 the following officers were elected:

**Chairman :** Mr Paul McCarthy, *Paul McCarthy Consulting, Crawley.*  
**Vice Chairman:** Dr Hellmuth Klingelhöffer, *BAM, Berlin.*  
**Treasurer:** Dr Peter Barnard, Doosan Babcock, Birmingham.  
**Secretary:** Mr Malcolm S Loveday, *Beta Technology ( NPL, Teddington).*

During the past 12 months the following changes have occurred in the committee representation:

Resignations :- There have been no resignations.

New Members :- Miss Kate Abbott from Siemens Power, Lincoln joined the committee and Dr Stuart Holdsworth (EMPA, Switzerland)re joined the main committee

In addition several new corresponding members joined during the course of the year. A list of the Main Committee members, as of March 2010, can be found on the web site.

## **4. Conclusion**

The Committee continues to operate as an effective Thematic Network. In-depth technical networking has continued, resulting in the development of new testing techniques, or contributing to the preparation of European & ISO Standards. As in 2008/9, the latter item has involved significant effort from members of the committee over the past year, fulfilling our remit to maintain testing methods for the high temperature testing field at a “state of the art” level. In addition, codes of practice issued by the committee have been kept under review and will, when necessary, be revised to reflect developments in technology and operational practice. Our aim for the future, as a committee, continues to be focussed on the generation of other such codes of practice, benefiting both the European and global testing communities. The main activity during the year focussed on planning major Workshops/ Seminars to be held in 2010 & 2011.

In conclusion I would like to thank all of the members of the HTMTC for their efforts and support, especially the members of the Working Groups who once again have moved forward the activities of the Committee. In addition I should particularly like to express my appreciation to our hard working Secretary, Mr Malcolm Loveday and to our Honorary Treasurer, Dr Peter Barnard, for so efficiently looking after the administrative affairs of the Committee throughout the year.

*Paul R. McCarthy,*

**Chairman, HTMTC. ( ESIS TC11 )**

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**APPENDIX 4**



**HTMTC (ESIS TC11)**  
**Forthcoming Meetings of Interest to HTMTC Members**

	<b><u>Dates</u></b>	<b><u>Meeting</u></b>	<b><u>Organiser(s)</u></b>	<b><u>Location</u></b>	<b><u>Contact Details</u></b>
1	20 <sup>th</sup> - 21 <sup>st</sup> April 2010	HT Testing in Controlled Environments	HTMTC/ Serco Assurance	Risley, UK	ML, PJ, MB, OO'G
2	June 6-11, 2010.	10 <sup>th</sup> International Fatigue Congress FATIGUE 2010	IPM	Prague, Czech Republic,	<a href="http://www.fatigue2010.cz">www.fatigue2010.cz</a>
3	30 <sup>th</sup> August – 3 <sup>rd</sup> September 2010	18 <sup>th</sup> European Conference on Fracture-ECF18	ESIS / DVM	Dresden, Germany	<a href="http://www.ecf18.de">www.ecf18.de</a>
4	10 <sup>th</sup> November 2010	HT Wear & Erosion of Materials	IOM3	Derby, UK	<a href="http://www.iom3.org/htwe">www.iom3.org/htwe</a>
5	16 <sup>th</sup> -18 <sup>th</sup> November 2010	ASTM – EPRI International Conference on Creep-Fatigue Interaction, CFI-2010	ASTM	San Antonio Texas	<a href="http://www.astm.org/symposia">www.astm.org/symposia</a> <a href="http://www.epri.com">www.epri.com</a>
6	12 <sup>th</sup> & 13 <sup>th</sup> May 2011	TMF Workshop	HTMTC / BAM	Berlin, Germany	H Klingelhöffer
7	Autumn 2011	Quality Assurance & Accreditation Issues for HT Testing. Part 1.	HTMTC	INCOTEST, Hereford (To be confirmed)	P McCarthy
8	22 - 27 May 2011	Creep 2011, the 12 <sup>th</sup> International Conference on Creep and Fracture of Engineering Materials and Structures	The Japan Institute of Metals	Kyoto, Japan	<a href="http://www.material.tohoku.ac.jp/creep2011">http://www.material.tohoku.ac.jp/creep2011</a> Kouichi Maruyama, Creep 2011, Conference Chairperson or Haruyuki Inui, Creep 2011, Conference Co-chairperson
9	May 2012	Quality Assurance & Accreditation Issues for HT Testing. Part 2.	HTMTC	?	P McCarthy
10	Autumn 2012?	Temperature Measurement in Mechanical Testing	HTMTC	?	MSL / PMcC

**APPENDIX 5*****VENUES of HTMTC MAIN COMMITTEE MEETINGS***

<b>No.</b>	<b>Date</b>	<b>Type</b>	<b>Venue</b>
1 <sup>st</sup>	05 Oct 82	Ord <sup>§</sup>	NPL, Teddington
2 <sup>nd</sup>	16 Feb 83	Ord	CEGB HQ, London
3 <sup>rd</sup>	14 Sep 83	Ord	UKAEA, Preston
4 <sup>th</sup>	10 Nov 83	Ord	Ashdowne House, London
5 <sup>th</sup>	12 Apr 84	Ord	Imperial College, London
6 <sup>th</sup>	11 Oct 84	Ord	IRD, Newcastle
7 <sup>th</sup>	16 Apr 85	Ord	Leicester University
8 <sup>th</sup>	7 Nov 85	Ord	Instron Ltd., High Wycombe
9 <sup>th</sup>	17 Apr 86	Ord	Bristol University
10 <sup>th</sup>	17 Oct 86	Ord	IRD, Newcastle
11 <sup>th</sup>	13 Jan 87	Ord	Imperial College, London
12 <sup>th</sup>	29 Apr 87	Ord	BSC, Rotherham
13 <sup>th</sup>	20 Oct 87	Ord	Rolls Royce, Leavesden
14 <sup>th</sup>	19 May 88	Ord	INCO International, Hereford
15 <sup>th</sup>	18 Oct 88	Ord	ERA, Leatherhead
16 <sup>th</sup>	22 Feb 89	AGM*	Imperial College, London
17 <sup>th</sup>	11 Oct 89	Ord	NPL, Teddington
18 <sup>th</sup>	14 Feb 90	AGM	Imperial College, London
19 <sup>th</sup>	11 Jul 90	Ord	Instron Ltd., High Wycombe
20 <sup>th</sup>	6 Feb 91	AGM	ERA, Leatherhead
21 <sup>st</sup>	27 June 91	Ord	INCO International, Hereford
22 <sup>nd</sup>	15 Apr 92	AGM	Sheffield University
23 <sup>rd</sup>	21 Sep 92	Ord	JRC, Petten
24 <sup>th</sup>	21 Dec 92	Ord	Instron Ltd, High Wycombe
25 <sup>th</sup>	28 Apr 93	AGM	NPL, Teddington
26 <sup>th</sup>	13 Oct 93	Ord	Leicester University
27 <sup>th</sup>	16 Feb 94	AGM	Imperial College, London
28 <sup>th</sup>	11 May 94	Ord	National Power, Swindon
29 <sup>th</sup>	12 Oct 94	Ord	UMIST, Manchester
30 <sup>th</sup>	15 Mar 95	AGM	Kirkaldy Testing Museum, London
31 <sup>st</sup>	11 Oct 95	Ord	Instron Ltd, High Wycombe
32 <sup>nd</sup>	13 Mar 96	AGM	BAM Institute, Berlin
33 <sup>rd</sup>	18 Oct 96	Ord	Bristol University
34 <sup>th</sup>	12 Mar 97	AGM	Imperial College, London
35 <sup>th</sup>	15 Oct 97	Ord	AEA Technology, Risley
36 <sup>th</sup>	18 Mar 98	AGM	NPL, Teddington
37 <sup>th</sup>	16 Sept 98	Ord	Ranmoor House, Sheffield University
38 <sup>th</sup>	10 Mar 99	AGM	IRC, Swansea University
39 <sup>th</sup>	13 Oct 99	Ord	NPL, Teddington
40 <sup>th</sup>	15 Feb 00	AGM	Contel Hotel, Darmstadt
41 <sup>st</sup>	11 Oct 00	Ord	DERA, Farnborough
42 <sup>nd</sup>	14 Feb 01	AGM	NPL, Teddington
43 <sup>rd</sup>	13 Nov 01	Ord	AlstomPower, Rugby
44 <sup>th</sup>	21 Mar 02	AGM	Kirkaldy Testing Museum, London
45 <sup>th</sup>	22 Oct 02	Ord	Open University, Milton Keynes
46 <sup>th</sup>	17 Mar 03	AGM	NPL, Teddington
47 <sup>th</sup>	22 Mar 04	AGM	NPL, Teddington
48 <sup>th</sup>	6 Dec 04	Ord	Serco Assurance, Risley
49 <sup>th</sup>	29 <sup>th</sup> April 05	AGM	RR Derby
50 <sup>th</sup>	21 <sup>st</sup> Sept 05	Ord/ TMF Conference	Berlin, Germany
51 <sup>st</sup>	26 <sup>th</sup> April 06	AGM	QinetiQ, Farnborough
52 <sup>nd</sup>	19 <sup>th</sup> Oct 07	Ord	NPL, Teddington
53 <sup>rd</sup>	18 <sup>th</sup> April 08	AGM	Imperial College, London
54 <sup>th</sup>	10 <sup>th</sup> Nov 08	Ord	British Energy, Barnwood, Glouc
55 <sup>th</sup>	24 <sup>th</sup> April 09	AGM/ ECCC Conf	EPMA, Dubendorf, Switzerland
56 <sup>th</sup>	27 <sup>th</sup> Oct 09	Ord / Temp Meas WG	Doosan-Babcock, Birmingham
57 <sup>th</sup>	20 <sup>th</sup> April 2010	AGM	SERCO, Risley
58 <sup>th</sup>	2 <sup>nd</sup> Nov 2010	Ord/ Temp Meas WG	Siemens, Lincoln
59 <sup>th</sup>	11 <sup>th</sup> May 2011	AGM/ TMF Conference	BAM, Berlin
60 <sup>th</sup>	Autumn 2011 ?	Ord/ Accreditation	Incotest , Hereford ( tbc)

§ Ordinary meeting

\* AGM's began when HTMTC became a Limited Company



# ESIS TC11

Company Registration No 02149907

Registered Charity 800892

Established 1982

[www.htmtc.com](http://www.htmtc.com)

## High Temperature Mechanical Testing Committee 2010 / 2011

### Aims: *To improve high temperature testing by:*

- Providing a Forum for discussion
- Organising conferences and laboratory visits
- Publishing conference proceedings and Codes of Practice
- Initiating research activities

A Council usually meets twice a year for conducting formal business, and arranging one- or two-day Symposia.

Current measurement High Temperature Working Groups include: a) Testing of Welds,

b) Crack Initiation and Measurement & c) Temperature Measurement for Mechanical Testing

<b>Chairman:</b>	Dr H. Klingelhöffer	BAM, Berlin, Germany
<b>Vice-Chairman:</b>	Mr L. Candler	Exova, UK
<b>Hon. Secretary:</b>	Mr Malcolm S. Loveday	Beta Technology Consultant / NPL
<b>Treasurer:</b>	Dr Peter Barnard	Doosan-Babcock, Tipton, Birmingham, UK
<b>Council Members:</b>		
	Miss Kate Abbott	Siemens Industrial Turbomachinery, Lincoln, UK
	Mr Colin Austin	SERCO Assurance, Risley, UK
	Prof. Martin Bache	Univ. Swansea, UK
	Dr. B. Dogan	EPRI, USA
	Mr Carl Barrett	UKAS, Feltham, UK
	Mr. S. Collins	INCO, Hereford, UK
	Dr. P Hähner	IE-JRC Petten, NL
	Dr Stuart Holdsworth	EMPA, Zurich, Switzerland
	Mr Phil Jones	Alstom Power Turbo-Systems, Rugby, UK
	Mr P. McCarthy	Consultant, Crawley, UK
	Dr P. Morris	CORUS, Rotherham, UK
	Mr I. McEntegart	INSTRON, High Wycombe, UK
	Prof. Kamran Nikbin	Imperial College, London, UK
	Mr Owen O'Grady	Exova, UK
	Mr Mike Spindler	British Energy, Gloucester, UK

**Corresponding Members (~100)** receive Minutes of the twice-yearly meetings, with Appendices on Technical Material

**No Membership Subscription is payable**

*The HTMTC is a non-profit making company limited by guarantee ( Reg. No. 2149907)*

***If you are interested in the activities of the HTMTC (ESIS TC11) or would like to be added to the Corresponding Members mailing list please contact one of the following***

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*( please indicate your particular interests and whether you wish to take an active part in the Working Groups)*