Hong Kong Association for Testing, Inspection and Certification Ltd.

Professional Certification Scheme for Testing Personnel
Organization Structure

HKTIC (legal entity) (GC)

Appeal Board
- Mr. W K Long
- Mr. Chapman Chan
- Mr. Y C Tsim

Certification Board
- Chairman - Mr. K L Tsang
  - Mr. Felix Chan
  - Mr. Raymond Lam
  - Dr. Albert Cheung
  - Dr. Christopher Leung
  - Mr. Gabuji
  - Mr. CY AU Yeung

Programme Secretariat
- Loretta Cheng

Clerk
- Iris
Organization Structure

Certification Board

- C & M
- F & E
- CMT
- EPT
- THT
- TGT
- Q & C

Working Committees:
C & M – chemical and microbiological testing
F & E – Food and Environmental testing
CMT – construction material testing
EPT – electrical products testing
THT – toys and hardlines testing
TGT – textiles and garments testing
Q & C – Quality and calibration
Objectives of the scheme (PCSTP)

- recognition and prestige for individual and create a competitive advantage over non-certified individuals in the same field;
- enhance employment opportunities; and
- establish a professional image for individual in a particular testing field.
PCSTP

- Historical events
  - Launching of Phase I – 26. 9. 2011
  - Examination – 14.4.2012
  - Launching of Phase II – 19.6.2013
Scope of Certification

- Levels of certification
  - Certified Testing Technician (CTT); and
  - Certified Testing Professional (CTP).
Scope of Certification

- Phase I - Six disciplines
- Chemical Testing
  - Elemental analysis
  - Organic analysis
- Construction Materials Testing
  - Building diagnostics tests
  - Construction materials tests
  - Foundation tests
  - Welding nondestructive tests
Scope of Certification

- Electrical Products Testing
  - Safety tests
  - Electromagnetic compatibility tests
  - Green tests

- Microbiological Testing
Scope of Certification

- Textiles and Garments Testing
  - Color fastness and care performance tests
  - Construction and physical performance
  - Fibre analysis
  - Flammability and safety tests

- Toys and Hardlines Testing.
  - Toys and children’s products tests
  - Hardlines tests
# Application

- **Applications as at 20 March 2013**

<table>
<thead>
<tr>
<th>Levels</th>
<th>CHT</th>
<th>CMT</th>
<th>EPT</th>
<th>MIC</th>
<th>TGT</th>
<th>THT</th>
<th>Sub-total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTP</td>
<td>132</td>
<td>29</td>
<td>79</td>
<td>10</td>
<td>48</td>
<td>65</td>
<td>363</td>
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<tr>
<td>CTT</td>
<td>149</td>
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<td>46</td>
<td>4</td>
<td>141</td>
<td>54</td>
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<td>TOTAL</td>
<td>281</td>
<td>62</td>
<td>125</td>
<td>14</td>
<td>189</td>
<td>119</td>
<td>790</td>
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</table>
## Application

- Examination results

<table>
<thead>
<tr>
<th>Discipline</th>
<th>CTP</th>
<th>CTT</th>
<th>Total</th>
<th>CTP</th>
<th>CTT</th>
<th>Total</th>
<th>CTP (%)</th>
<th>CTT (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHT</td>
<td>27</td>
<td>23</td>
<td>50</td>
<td>56</td>
<td>110</td>
<td>166</td>
<td>48.2</td>
<td>20.9</td>
<td>30.1</td>
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<tr>
<td>CMT</td>
<td>1</td>
<td>14</td>
<td>15</td>
<td>2</td>
<td>23</td>
<td>25</td>
<td>50.0</td>
<td>60.9</td>
<td>60.0</td>
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<tr>
<td>EPT</td>
<td>17</td>
<td>20</td>
<td>37</td>
<td>31</td>
<td>29</td>
<td>60</td>
<td>54.8</td>
<td>69.0</td>
<td>61.7</td>
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<tr>
<td>MIC</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>66.7</td>
<td>50.0</td>
<td>60.0</td>
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<tr>
<td>TGT</td>
<td>4</td>
<td>31</td>
<td>35</td>
<td>11</td>
<td>94</td>
<td>105</td>
<td>36.4</td>
<td>33.0</td>
<td>33.3</td>
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<tr>
<td>THT</td>
<td>14</td>
<td>13</td>
<td>27</td>
<td>29</td>
<td>38</td>
<td>67</td>
<td>48.3</td>
<td>34.2</td>
<td>40.3</td>
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<tr>
<td><strong>Total</strong></td>
<td>65</td>
<td>102</td>
<td>167</td>
<td>132</td>
<td>296</td>
<td>428</td>
<td>49.2</td>
<td>34.5</td>
<td>39.0</td>
</tr>
</tbody>
</table>
Application

- As at 20 March 2013
  - Total Applications: 790
  - Total Applicants: 713
  - Certificate Issued: 290
Certification criteria

- Certification Handbook
  - CC01 - Chemical testing
  - CC02 – Construction materials testing
  - CC03 – Electrical products testing
  - CC04 – Microbiological testing
  - CC05 – Textiles and garments testing
  - CC06 – Toys and hardlines testing
New Scope of Certification

- Levels
  - Certified Testing Technician
  - Certified Testing Professional

- Calibration— no sub-category

- Environmental
  - Inorganic analysis
  - Organic analysis
New Scope of Certification

- Food
  - Labelling analysis
  - Contaminant analysis

- Quality Assurance
  - Only for CTP
  - No - subcategory
New Certification criteria

- 4 Certification Handbooks
  - CC07 - Calibration
  - CC08 – Environmental testing
  - CC09 – Food testing
  - CC10 – Quality assurance

- Available for download at www.hktic.org
Certification criteria

- Foreword
- 1- General
- 2-Scope of Certification
- 3-Eligibility for Certification
- 4-Examination Procedure
- 5-Application procedure for certification/examination
- 6-Appeal
- 7-Obligation
Certification criteria

- Appendix 1 Examination Syllabus and Specimen Questions of CTT
- Appendix 2 Examination Syllabus and Specimen Questions of CTP
- Appendix 3 Training courses approved by Certification Board
- Appendix 4 Guidelines for counting CPDUs
- Appendix 5 References
Certification Criteria

Routes to be Certified

Testing technician

Diploma in relevant discipline + 2 years experience

≥ 10 years of experience

Pass in examination (Scheme)

Complete all the required training courses

Certified Testing technician (CTT)
Certification Criteria

- Testing Professional
  - Bachelor degree in relevant discipline + 3 years relevant experience
  - CTT + 5 years of relevant supervisory experience post CTT
  - HOKLAS AS+ 8 years of relevant experience
  - ≥ 15 years of relevant experience, 5 years of which shall be at a managerial position

- Pass in examination (Scheme)
- Complete all the required training courses

- Professional interview

Certified Testing Professional (CTP)
Certification criteria

- Eligibility for certification for CTT
  - Academic
    - diploma in relevant discipline, 2 years of relevant testing experience; or
    - over 10 years of testing experience (academic requirement can be waived), or
    - other equivalent qualification and experience
  - Training
    - pass in PCSTP examination, or
    - Certificate of achievement in certified training courses for all competence requirements
Certification criteria

- Eligibility for certification for CTP
- Academic
  - BSc. Degree in relevant discipline, 3 years of relevant experience; or
  - CTT + 5 years post certified supervisory experience; or
  - Other equivalent qualification and experience
Certification criteria

- **Training**
  - pass in PCSTP examination, or
  - Certificate of achievement in certified training courses for all competence requirements, or
  - 5 years at managerial position and no less than 15 years of relevant experience
  - HOKLAS approved signatory with not less than 8 years of relevant experience and the scope of signatory approval covering the major measurement techniques for the sub-category applied;

- obtain satisfactory results in professional assessment by interview.
Certification criteria

- HOKLAS approved signatory
  - The Scheme just recognize equivalence of technical knowledge of current HOKLAS Approved Signatory
  - Signatory of MRA accreditation body will not be considered.
Certification criteria

- Competence requirements for CTT
- General requirements
  - Understanding of ISO17025
  - Laboratory safety
  - Integrity management
  - Quality control
- Technical requirements
  - Understanding of basic laboratory technique
  - Knowledge on equipment usage
Certification criteria

- Competence requirements for CTP
- Management requirements
  - Supervisory skill
  - Integrity management
Certification criteria

- Competence requirements for CTP
- Quality requirements
  - Laboratory Management in compliance with ISO 17025
  - Laboratory safety
  - Statistical treatment of data and quality control requirement
Certification criteria

- Technical requirements
  - Estimation of Measurement Uncertainty
  - Method validation and verification
  - Interpretation of results and reporting requirements
  - Requirements of equipment calibration
  - Principles of laboratory techniques employed in testing
Examination

- Types of examination
  - Written
  - Interview

- Types of questions
  - Multiple choice questions
  - Short answer questions
  - Open-ended questions
Examination (CTT)

- General requirements
  - multiple–choice questions @1.5 marks
  - Short answer questions @4 marks
  - 40/100 for CHT and MIC
  - 30-35/100 for other disciplines

- Technical requirements
  - multiple–choice questions
  - short answer questions
  - 60/100 for CHT and MIC
  - 65-70/100 for other disciplines
## Examination (CTT)

<table>
<thead>
<tr>
<th>Part A</th>
<th>MC 1.5@</th>
<th>SQ 4@</th>
<th>Sub-total (marks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>17025</td>
<td>4</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Ethics</td>
<td>4</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Safety</td>
<td>4</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Quality (CHT &amp; MIC only)</td>
<td>4</td>
<td>1</td>
<td>10</td>
</tr>
</tbody>
</table>

### Part B

<table>
<thead>
<tr>
<th>Technical</th>
<th>Sub-total</th>
<th>Subtotal</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>28/24</td>
<td>6</td>
<td>70/60</td>
<td></td>
</tr>
</tbody>
</table>

| Total                          | 40        | 10         | 100 (>=60) |

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Notes:
- **Part A**
  - 17025: 4 marks for MC 1.5, 1 mark for SQ 4, total 10 marks.
  - Ethics: 4 marks for MC 1.5, 1 mark for SQ 4, total 10 marks.
  - Safety: 4 marks for MC 1.5, 1 mark for SQ 4, total 10 marks.
  - Quality (CHT & MIC only): 4 marks for MC 1.5, 1 mark for SQ 4, total 10 marks.
- **Part B**
  - Technical: 28/24 marks for MC 1.5, 6 marks for SQ 4, total 70/60 marks.
- **Total**
  - 40 marks for MC 1.5, 10 marks for SQ 4, total 100 marks (>=60 is required).
Examination (CTT)

- Time length of examination
  - Written examination – 120 minutes

- Marking system
  - Model answer set for multiple choice questions.
  - Correct answer – pre-set marks
Examination (CTT)

- Passing mark
  - Total: normally 60 out of 100
- No partial exemption
Examination (CTP)

- Similar structure as CTT
- open-ended questions (same as short questions)
- Time: 180 minutes
- Passing mark: 60 out of 100
- Professional assessment by interview
  - Questions on all requirements
  - Sector specific questions for the candidate
  - No exemption
  - 30 – 50 minutes
Examination (CTP)

- General requirements (50-60/100)
  - 20 multiple choice questions: @1 mark
  - 4 short answer questions @ 5 marks
  - 1 long question @ 10 marks
- Technical requirements (40-50/100)
  - 10 multiple choice questions: @1 mark
  - 2 short answer questions @ 5 marks
  - 2 long question @ 15 marks
## Examination (CTP)

<table>
<thead>
<tr>
<th>Part A</th>
<th>MC 1@</th>
<th>SQ 5@</th>
<th>LQ (10-20)</th>
<th>Sub-total (marks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>17025/quality</td>
<td>5</td>
<td>1/2</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Ethics</td>
<td>5</td>
<td>0/1</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Safety</td>
<td>5</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Management</td>
<td></td>
<td></td>
<td>1 x 10</td>
<td>10</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>5</td>
<td>1</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Validation (CHT only)</td>
<td></td>
<td>2</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Part B</td>
<td>Sub-total</td>
<td></td>
<td></td>
<td>50 (&gt;=20)</td>
</tr>
<tr>
<td>Technical</td>
<td>10</td>
<td>2</td>
<td>2 x 15</td>
<td>50</td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td></td>
<td></td>
<td>50 (&gt;=20)</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>6</td>
<td></td>
<td>100 (&gt;=60)</td>
</tr>
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</table>
Application procedure (initial, upgrade and extension)

- Application

<table>
<thead>
<tr>
<th>Application</th>
<th>Process</th>
<th>Certified Testing Technician</th>
<th>Certified Testing Professional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>On-line application on <a href="http://www.hktic.org">www.hktic.org</a>. Print and sign the application form, enclose application fee and submit by post</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial review</td>
<td>Review of completeness of form and supporting documents + application fee</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Application procedure (initial, upgrade and extension)

- Application form and supporting documents
  - Academic qualifications;
  - Relevant Experience in test sub-category to be certified;
  - Certificate of achievements in appropriate training courses; and
  - Any other relevant records (e.g. CPDUs)
- Working experience confirmed by supervisor or another CTP
Application procedure (initial, upgrade and extension)

- Certification process

<table>
<thead>
<tr>
<th>Certification Process</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process</strong></td>
</tr>
<tr>
<td>Decision of certification</td>
</tr>
<tr>
<td>Register of certification</td>
</tr>
</tbody>
</table>
Re-certiﬁcation

- Within 3 years
- Submission of
  - Records of Continuing Professional Development
- Continuing Professional Development Unit (CPDU)
- CTT: 30 CPDUs per 3 years cycle
- CTP: 60 CPDUs per 3 years cycle
- Updated lists of courses and seminar that CPDUs are granted are available at www.hktic.org
Re-certification

CPDUs (PCSTP07)

<table>
<thead>
<tr>
<th>Activities</th>
<th>CPDUs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training course, seminar or workshop on relevant topics (^{\text{Note1}}) (Internal training and workshops on relevant topics are also counted (^{\text{Note2}}))</td>
<td>1 CPDU for candidate attending workshops or seminars which involve each contact hour.</td>
</tr>
<tr>
<td>Author or co-author of an article published in a refereed journal</td>
<td>30 CPDUs per article (author)</td>
</tr>
<tr>
<td></td>
<td>20 CPDUs per article (co-author)</td>
</tr>
<tr>
<td>Author or co-author of an relevant article published in a non-refereed journal</td>
<td>15 CPDUs per article (author)</td>
</tr>
<tr>
<td></td>
<td>10 CPDUs per article (co-author)</td>
</tr>
<tr>
<td>Speaker on relevant topics at a conference or seminar</td>
<td>1 CPDU per 30 minutes</td>
</tr>
<tr>
<td>Member or moderator on relevant topics at a conference, symposium or workshop</td>
<td>5 CPDUs per activity</td>
</tr>
<tr>
<td>Author or co-author of textbook on relevant field</td>
<td>30 CPDUs (author)</td>
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<tr>
<td></td>
<td>20 CPDUs (co-author)</td>
</tr>
</tbody>
</table>
# Re-certification

## CPDUs

<table>
<thead>
<tr>
<th>Activities</th>
<th>CPDUs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developer of content of a new approved courseware.</td>
<td>3 CPDUs per 1 hour courseware delivery</td>
</tr>
<tr>
<td>Board or committee member of testing organizations and/or government agencies Note 3</td>
<td>20 CPDUs (board) per annum</td>
</tr>
<tr>
<td></td>
<td>10 CPDUs (committee) per annum</td>
</tr>
<tr>
<td>Working and sub-committee member of testing organizations and/or government agencies Note 3</td>
<td>2 CPDUs for each attendance of committee meeting, maximum 10 CPDUs per annum</td>
</tr>
<tr>
<td>Examiner of PCSTP</td>
<td>1 CPDU for interview of one candidate applying for certified testing professional</td>
</tr>
<tr>
<td>Contribution of examination questions for PCSTP scheme Note 4</td>
<td>0.5 CPDU for multiple choice and short questions (including answers)</td>
</tr>
<tr>
<td></td>
<td>1 CPDU for long questions</td>
</tr>
</tbody>
</table>
## Re-certification

<table>
<thead>
<tr>
<th>Activities</th>
<th>CPDUs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of new international test standard</td>
<td>30 CPDUs</td>
</tr>
<tr>
<td>Method verification of accredited new international/regional test standard (limited to 2 developers for one method) Note5</td>
<td>10 CPDUs</td>
</tr>
<tr>
<td>Development of accredited in-house method (limited to 2 developers for one in-house method) Note5</td>
<td>15 CPDUs</td>
</tr>
<tr>
<td>Technical visit</td>
<td>0.5 CPDU per each visit hour</td>
</tr>
</tbody>
</table>
Re-certification

- CPDUs
- CTT – no limitations on activities
- CTP – at least 2 activities
- In case only 2 activities, maximum contribution of each activity = < ½ of total CPDUs
- Log for CPDUs, evidence of CPDUs either by certificate of attendance, achievement or endorsed by supervisor
- Record form of CPDUs (PCSTP Form02) is available at www.hktic.org
Under the SME sponsorship, the fees mentioned below for the 4 new disciplines will be waived till 28 February 2014

<table>
<thead>
<tr>
<th>Level</th>
<th>Type of application/examination</th>
<th>Fee (H.K.$)</th>
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<tbody>
<tr>
<td>CTT</td>
<td>Initial and upgrade application</td>
<td>H.K.$ 300</td>
</tr>
<tr>
<td></td>
<td>Examination (written), if applicable Remarks</td>
<td>H.K.$ 500</td>
</tr>
<tr>
<td></td>
<td>Annual subscription fee</td>
<td>H.K.$ 500</td>
</tr>
<tr>
<td>CTP</td>
<td>Initial and upgrade application</td>
<td>H.K.$ 500</td>
</tr>
<tr>
<td></td>
<td>Examination (written) ), if applicable Remarks</td>
<td>H.K.$ 500</td>
</tr>
<tr>
<td></td>
<td>Examination (professional interview)</td>
<td>H.K.$ 1000</td>
</tr>
<tr>
<td></td>
<td>Annual subscription fee</td>
<td>H.K.$ 500</td>
</tr>
</tbody>
</table>
Appeal

- Written Examination Recheck
  - Within 10 days after posting of results
  - Written request (Appeal Form available on website)
  - Charge: as stipulated in PCSTP06
  - Non-refundable
Appeal

- Professional assessment by interview
  - grounds for such review
  - Within 10 days after posting of results
  - Written request (Form available on website)
  - Charge: as stipulated in PCSTP06
  - Non-refundable
Schedule

- Application
  - On-line application available at www.hktic.org for the 4 new disciplines
  - Ready to accept application
  - Application fee waived from till end of February 2014
Schedule

- Examination
  - Tentatively scheduled in late October (Saturday)
  - Deadline for submission of application of examination for the 4 new disciplines: 31 August 2013
  - Examination fee waived from till end of February 2014
Schedule

- Existing 6 disciplines
  - On-line application
  - Examination also scheduled in late October
  - Charges as stipulated in PCSTP06 apply

- September
  - Seminar on syllabus and specimen questions to candidates applying for examination
END OF SESSION

Thank you