

Seminar on Supports to Construction Industry –
How Product Certification Helps in Risk Management
23 November 2011

Current State and Future Development of Product Certification in Hong Kong Housing Authority Development Projects

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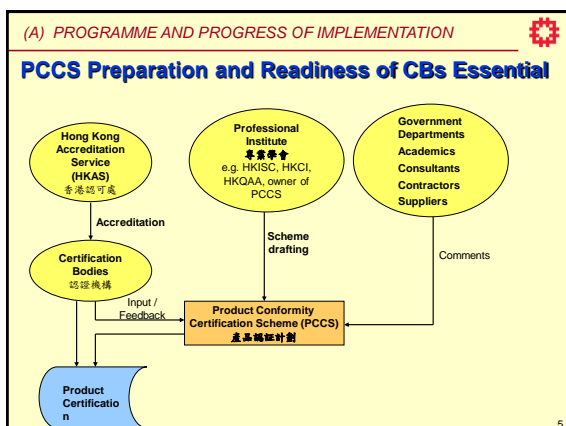
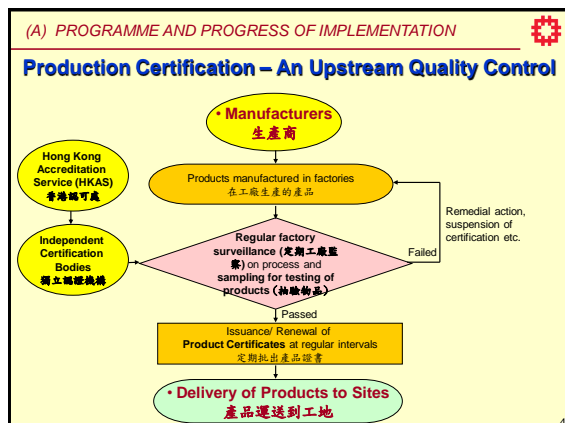
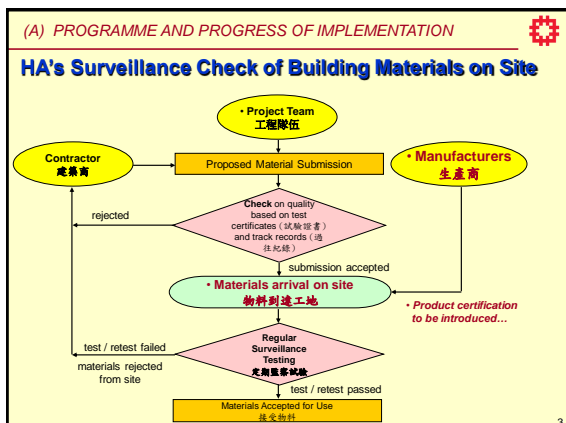
(A) PROGRAMME AND PROGRESS OF IMPLEMENTATION

Quality Housing : Partnering for Change

Assuring built quality
保證建築質量

Assuring quality of workmanship and materials on site
保證工地施工及物料質量

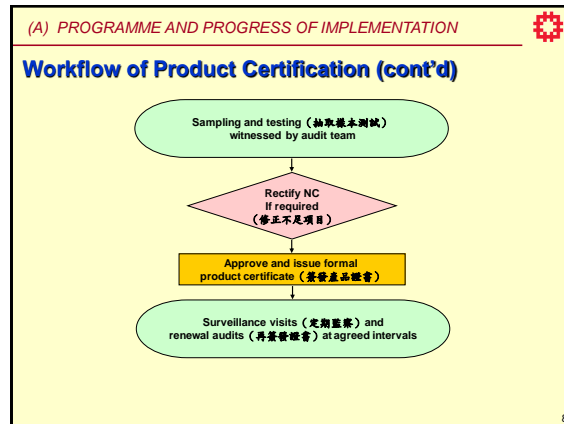
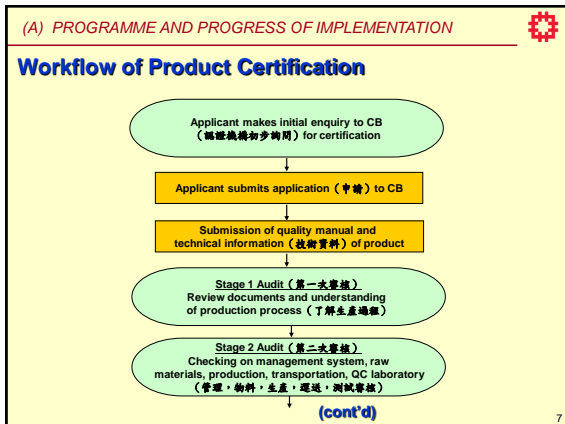
Assuring quality of workmanship and materials off-site
保證工地以外施工及物料質量



(A) PROGRAMME AND PROGRESS OF IMPLEMENTATION

Product Conformity Certification Scheme

For Ceramic Tile 磁磚 For Repair Mortars 修葺砂浆



(A) PROGRAMME AND PROGRESS OF IMPLEMENTATION

Surveillance & Re-Certification Audit

Intervals	Fire product	QSPSC	Tile Adhesive	Repair Mortar	Cement
Surveillance Audit	6 – 9 months	3 months – 1 st year	1 year	1 year	6 months
2 nd Cycle (SV)	6 – 9 months	4 months – 2 nd year 6 months – 3 rd year	1 year	1 year	6 months
Re-certification Audit	3rd Year	3rd Year	3rd Year	3rd year	3rd year

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(A) PROGRAMME AND PROGRESS OF IMPLEMENTATION

Programme for Implementation in HKHA Projects

Timber Doorsets (Fire Resistance)

Wall Panels for Partition (Fire Resistance)

Stage 1 Implementation (Tender out date : 1/5/2010)

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(A) PROGRAMME AND PROGRESS OF IMPLEMENTATION

Programme for Implementation in HKHA Projects

Cement Products for Architectural Use

Tile Adhesives

Stage 2 Implementation (Tender out date : 1/8/2010)

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(A) PROGRAMME AND PROGRESS OF IMPLEMENTATION

Programme for Implementation in HKHA Projects

Repair Mortars

Ceramic Tiles

Stage 3 Implementation (Tender out date : 1/12/2010)

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(A) PROGRAMME AND PROGRESS OF IMPLEMENTATION

Programme for Implementation in HKHA Projects



Aluminium Windows

Stage 4 Implementation
(Tender out date :
End of 2011 (tentative))

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(A) PROGRAMME AND PROGRESS OF IMPLEMENTATION

Current Progress of Publication of Product Conformity Certification Scheme (PCCS)

Building Materials / Products	Product Conformity Certification Scheme (PCCS)
Panel Walls (Fire Resistance) *	PCCS for Passive Fire Protection Products published in June 2007 and now under review
Timber Doorsets (Fire Resistance) #	published in January 2010
Cement Products *	published in January 2010
Tile Adhesives *	published in September 2010
Repair Mortars *	published in September 2010
Ceramic Tiles *	published in September 2010
Aluminium Windows #	To be launched soon

We would like to express our sincere gratitude to the following professional institutes for preparing the above schemes:-

- * Hong Kong Institute of Steel Construction (HKISC)
- # Hong Kong Concrete Institute (HKCI)

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(A) PROGRAMME AND PROGRESS OF IMPLEMENTATION

Current Progress of Certifying Bodies Securing Accreditation

Building Materials / Products	Certifying Bodies
Panel Walls (Stage 1)	<ul style="list-style-type: none"> Fugro (accredited) Castco (applied)
Timber Doorsets (Stage 1)	<ul style="list-style-type: none"> Fugro (accredited) Castco (applied)
Cement Products for Architectural Use (Stage 2)	<ul style="list-style-type: none"> SGS (accredited) Castco (applied)
Tile Adhesives (Stage 2)	<ul style="list-style-type: none"> Fugro (accredited) Castco (accredited) HKQAA (accredited)
Repair Mortars (Stage 3)	<ul style="list-style-type: none"> Fugro (applied) Castco (applied)
Ceramic Tiles (Stage 3)	<ul style="list-style-type: none"> Fugro (applied) Castco (applied)

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(A) PROGRAMME AND PROGRESS OF IMPLEMENTATION

Current Progress of Manufacturers/Suppliers applying for Product Certification

Building Materials /Products	Interested Suppliers	Certification Status (Anticipated date to obtain product certification)
Panel Walls (Fire Resistance) (Stage 1)	<ul style="list-style-type: none"> Buildmates Yau Lee Wah 	Certified (04/2011) Stage 2 audit (end of 2011)
Timber Doorsets (Fire Resistance) (Stage 1)	<ul style="list-style-type: none"> Kwong Yin Wing Koo Tai Wah 	Stage 2 audit (end of 2011) Stage 1 audit (early 2012)
Cement for Architectural Use (Stage 2)	<ul style="list-style-type: none"> Green Island Wealth Bridge Continental Cement and Gypsum Macau Cement 	Certified (05/2011) Certified (05/2011) Stage 2 audit (end of 2011)

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(A) PROGRAMME AND PROGRESS OF IMPLEMENTATION

Current Progress of Suppliers applying for Products Certification (cont'd)

Building Materials /Products	Interested Suppliers	Certification Status (Anticipated date to obtain product certification)
Tile Adhesives (Stage 2)	<ul style="list-style-type: none"> Scoretech E-Mix Optimix 	Certified (03/2010) Certified (04/2010) Certified (04/2010)
Repair Mortars (Stage 3)	<ul style="list-style-type: none"> Fosroc Scoretech E-Mix Optimix Ronorete 	All enter into stage 2 audit (early 2012)
Ceramic Tiles	<ul style="list-style-type: none"> Nobel Regent Ming Hop Tien Shan Welltiles CityJet Score 	Stage 2 audit (end of 2011) All enter into stage 2 audit (early 2012)

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(B) FACTORS TO BE CONSIDERED IN IMPLEMENTATION

Further Considerations

- Quest for owners (actually volunteers) to establish **Product Conformity Certification Scheme (PCCS)** for concerned materials.
- **Preparedness of testing laboratories** to be HOKLAS accredited, or recognized under Mutual Recognition Agreement with Hong Kong Accreditation Service (HKAS).
- Any potential entities of interest to pursue accreditation as **Certifying Bodies (CB)** by HKAS.

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(B) FACTORS TO BE CONSIDERED IN IMPLEMENTATION

Other building materials being pursued for product certification in HKHA's development projects in 2012 / 2013

- uPVC drainage pipes & fittings(*)
- Close-coupled water closet suites(*)
- Mesh reinforcement



Note () : Hong Kong Institution of Plumbing and Drainage Limited (HKIPD) has kindly agreed to prepare the two PCCSs.*



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(B) FACTORS TO BE CONSIDERED IN IMPLEMENTATION

Cost and time of getting Product Certification

- Cost for each material to have certification is in the order of \$100,000, although some materials may require higher cost because of more expensive testing cost (e.g. fire resistance test for timber door or panel walls).
- The time frame of getting the certificate is around 6-9 months for well prepared application.

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(B) FACTORS TO BE CONSIDERED IN IMPLEMENTATION

Product Certification Requirement vs Client's Requirements (CSR)

- Product Certification (P.C.) Requirements are to be promoted to majority of factories supplying to Hong Kong industry.
- Standards should not be targeted too high, but to a level commensurate with majority needs in the industry; otherwise, P.C. may not be readily received.

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(B) FACTORS TO BE CONSIDERED IN IMPLEMENTATION

Product Certification Requirement vs Client's Requirements (CSR) (cont'd)

- Client Specific Requirements (CSR) may be tailor-made to suit specific needs of client and can be specified under client's own contract specification associated with P.C.
- When the majority of industry has progressed to a higher standard, these CSR conditions could be incorporated into the PCCS.

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(B) FACTORS TO BE CONSIDERED IN IMPLEMENTATION

Availability and Choice of Laboratories (In-territory vs Out-territory)

- Chief Executive Policy Address encourages Hong Kong Testing Services Industry to play an important role – one of the six pillars.
- Laboratory services in Hong Kong have a good reputation to be impartial and independent.
- Where appropriate, testing associated with P.C. audit may deploy Hong Kong laboratories under CSR, unless the testing laboratory for a particular material is not available in-territory.

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(B) FACTORS TO BE CONSIDERED IN IMPLEMENTATION

Availability and Choice of Laboratories (In-territory vs Out-territory) (cont'd)

- Certification audit for critical tests should better be witnessed by representatives of certifying bodies.
- Testing should follow international standards; whereas frequency of testing should be nominal. Higher frequency of testing should better be under CSR, if required, for otherwise it may incur excessive cost and time to the manufacturers.

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Overseas Suppliers vs Mainland Suppliers

- Overseas or Mainland products which own good international brand name and which are produced under rigorous supervision may be exempted from P.C. requirements. The consideration for exemption could be handled on case-by-case basis.
- From practical point of view, it may also be difficult to conduct surveillance audits in very distant factories.



Overseas Suppliers vs Mainland Suppliers (cont'd)

- For products with well established factory control, accredited test certificates may suffice. Normally, with relatively large quantity of production for worldwide market, test certificates are issued more frequently and more up-to-date.
- For Mainland suppliers, particularly those in the Pearl River Region, control through P.C. in the upstream could assure better quality and safeguard the interest of our construction industry.



Traceability of Products

- Products certified in the factory are continuously delivered and disseminated to the clients. They may be transported directly to designated clients or to the open market.
- Designated clients may require certain traceability of products under CSR. For the open market, it is up to the manufacturer who may initiate their own system of traceability, such as product quality labels, to give purchasers better confidence.



Traceability of Products (cont'd)

- In HKHA, we will use Radio Frequency Identification (RFID) for four types of building products, namely precast facade, aluminum window, timber door and metal gateset.



Traceability of Products (cont'd)



RFID in Precast Facade



RFID Reader



Traceability of Products (cont'd)



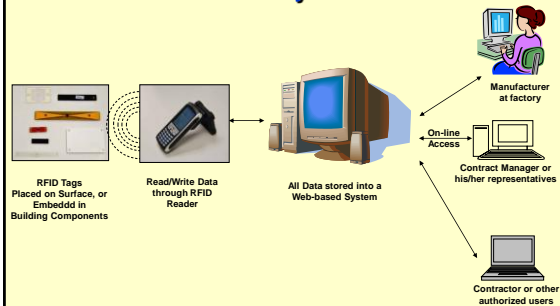
RFID in Aluminium Window



RFID in Metal Gateset



RFID in Timber Door

(B) FACTORS TO BE CONSIDERED IN IMPLEMENTATION**An RFID System**

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CONCLUSION

- Product Certification is a new and innovative initiative in the Hong Kong Industry.
- It requires the collaboration and cooperation of various stakeholders to make it a success.
- Large corporation / clients could take the lead to drive ahead this meaningful initiative.

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Thank You



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