Product certification – building block for quality constructions and buildings

Building safety is of utmost importance, and quality of construction materials forms a vital part of it. Construction materials product certification, by way of third-party monitoring, enables upstream quality control from the start of the supply chain. It helps assure the quality and reliability of construction materials and enhance their production consistency. With all these advantages of using certified building materials, the BEAM Plus New Buildings Version 2.0 (NB V2.0), launched in September 2019, encourages the use of certified materials by awarding developers with credits in the assessment of new green buildings.

Product certification serves as tools for quality assurance

A product certification scheme on construction materials stipulates a set of rules and procedures for suppliers to comply with. According to the scheme's specifications, a third party certification body would inspect the production process in factories, obtain samples on-site for testing and conduct periodic surveillance visits. After confirming that all the administration and technical regulations including quality performance specifications have been met and that product samples have passed the relevant tests, the certification body would certify that the construction product conforms to the requirements set out in the certification scheme.

The Hong Kong Concrete Institute (HKCI) is one of the major bodies in Hong Kong that is participating actively in drawing up product certification schemes to suit the local needs. So far, it has developed product certification schemes for a total of six construction materials, namely cement products, ceramic tiles, tile adhesives, repair mortar, mesh reinforcement and aggregates for concrete. Ir Dr Jaime Yeung, Vice President of the HKCI, says, "Building safety is of paramount importance, and quality of construction materials forms the fundamentals. For instance, substandard tile adhesive may cause detachment of ceramic tiles from external walls of high-rise buildings, leading to serious consequences. Indeed, good quality of construction materials is one of the critical success factors of building safety. As such, the Institute has put in great efforts in drawing up product certification schemes for a number of high-risk construction materials and building products, to help safeguard construction safety and quality."

The development of a product certification scheme is no easy task, and it often takes more than a year to complete. Says Ir Dr Yeung, "In order to devise a scheme that can be practicably implemented and can best cater for the needs of the construction sector, the HKCI worked with a group of experienced professionals including academics, researchers and industry representatives, and set out specific requirements based on widely accepted normative standards covering different stages from product design and raw materials procurement to production process, in-process quality control, storage and delivery."

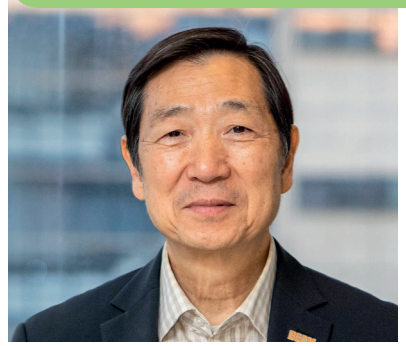
The importance and benefits of using product certification schemes are multifold. It enables upstream quality control from the start of the supply chain and enhances product consistency and reliability. Through third-party assessment, buyers and consumers will also have greater confidence in product quality in view of its compliance with recognised standards or specific requirements. Ir Dr Yeung remarks, "Particularly, some public organisations like the Hong Kong Housing Authority require certified construction materials in works contracts. From the manufacturers' or suppliers' point of view, capitalising on product certification not only enhances product reputation and increases their competitive edge, but also brings them more business opportunities," he adds.

Ir Dr Jaime Yeung, Vice President of the Hong Kong Concrete Institute, hopes that the construction sector will make good use of product certification to better safeguard building quality and safety.

Ir Dr Yeung takes pride in that, by helping the development of various product certification schemes, the HKCI plays an active role in contributing to higher overall construction quality in Hong Kong and beyond. As most of the HKCI professionals work as volunteers, Ir Dr Yeung considered that succession planning is an important task for the Institute. "From time to time, we get feedback from members and stakeholders in response to new industrial and market requirements. We also need to keep the schemes updated with reference to new government policies and evolving international standards. It is essential to have more experts joining us to continue this meaningful work."

Looking ahead, Ir Dr Yeung hopes that the construction sector will make good use of product certification to better safeguard building quality and safety. The Institute will also further promote the schemes by organising seminars and training courses for the construction sector.

BEAM Plus in support of product certification



Ir Ho Chi-shing, General Manager of the BEAM Society, expects that the BEAM Plus New Buildings Version 2.0 will give more incentive to private construction developers to adopt construction materials product certification.

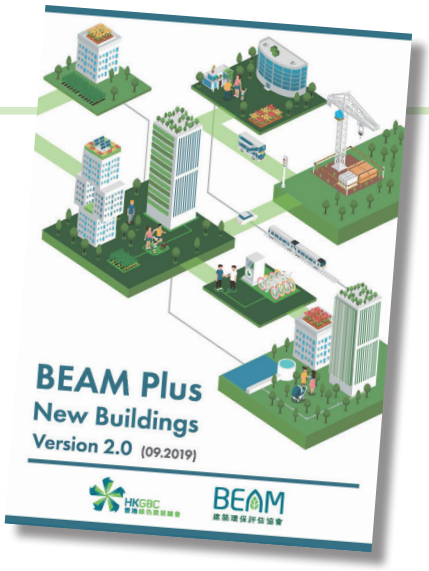
While the use of product certification is a tender requirement for many public construction projects, the practice has been given a gentle push in the wider community thanks to the latest launch of the BEAM Plus NB V2.0. Hong Kong's green building assessment tool, BEAM Plus, is owned and assessed by the BEAM Society. The assessment tool comprises a comprehensive set of performance criteria for a wide range of sustainability issues relating to the planning, design, construction, commissioning, management, operation and maintenance of a building.

In September 2019, the BEAM Society officially launched the BEAM Plus NB V2.0, which can be applied to new building projects as well as major renovation/alteration works on existing buildings. This upgraded BEAM Plus NB V2.0 is designed to provide practicable, clear and standardised criteria to assess the performance of green buildings.

Ir Ho Chi-shing, General Manager of the BEAM Society, explains the reasons behind this move. "Since the launch of the BEAM Plus NB Version 1.2 in 2012, the rating tool has continued to evolve after taking into account feedback from the industry. The NB V2.0 was hammered out as a result of the suggestions and comments collected over the past seven years as well as updated government guidance on the adoption of energy-efficient features and renewable energy technologies."

With the objectives to maintain the assessment criteria at a level beyond statutory requirements, the NB V2.0 was revised with some updated assessment aspects, such as Health and Wellbeing, Material and Waste Aspects, Energy Use, Water Use and Indoor Environmental Quality, which could enhance the adaptability, certainty and practicality of the assessment.

Under the Material and Waste Aspects, for example, credits are given for use of building materials certified to a product certification scheme. Ir Ho further explains the benefits of using certified construction materials, "Product certification provides quality assurance. Indeed, certified materials and products are usually more durable, hence they help minimise replacement frequency and prevent excessive material use. As such, they go in line with the green building concept, and we recommend developers and contractors to use certified construction materials." The new move is expected to give more incentive to private construction developers to adopt construction materials product certification.



Behind product certification: accreditation service

In Hong Kong, there are currently 17 product certification schemes on construction materials available in the marketplace. Certification bodies may offer certification services according to these product certification schemes. To demonstrate they are competent in offering the service, certification bodies may participate in the voluntary accreditation scheme administered by the Hong Kong Accreditation Service (HKAS) under the Innovation and Technology Commission.

Accreditation is a third-party attestation to demonstrate the competence of a certification body to carry out specific conformity assessment tasks. Mr Wilson Shum, Executive Administrator of the HKAS, says, "Achieving HKAS accreditation status ensures that the certification body is competent in providing the certification service in accordance with international standards of practice. This is due to the fact that the certification bodies have been rigorously assessed by independent specialists, including on-site assessment of the management system operation and certification process. Therefore, there is higher confidence in the products certified by an accredited certification body in meeting the applicable requirements."

Mr Wilson Shum, Executive Administrator of the HKAS, emphasises, the advantages of using products that are certified by an accredited certification body.

An endorsed certificate issued by an accredited certification body bears the HKAS accreditation symbol. Mr Shum explains, "When talking about 'accreditation' of a certification body, many people may think that 'if a certification body has been accredited, all certification services it performs must be accredited'. However, this is not always the case. Accreditation is item-specific and refers to the specific product certification scheme listed in the scope of accreditation of a certification body."

For more details about the scope of accreditation of accredited certification bodies, please visit the HKAS' website at www.hkas.gov.hk.

The HKCAS accreditation symbol displayed on endorsed certificates issued by accredited certification bodies.