

# City Talk

## HK breaking new ground in the building industry



**Nuts and bolts**

Edmund Leung

Hong Kong is an international city that takes pride in its top-class infrastructure but such a reputation carries with it a higher cost that must be controlled for efficiency.

For years, Hong Kong has been ranked in the top three of the International Construction Cost Index, but we are happy to see that the concerted efforts of the Development Bureau and industry stakeholders brought that down to ninth in 2024, though we still remain the highest in Asia.

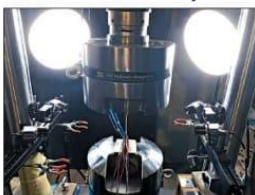
This marked improvement in cost-efficiency is the result of a strategic study conducted by the bureau that started in the fourth quarter of 2023.

It analyzed and identified the major factors that led to high costs and formulated and recommended measures to lower them.

As well, setting up the Building Testing and Research Institute in August and putting it under the bureau's purview aims to support this initiative under one of its development directives.

The bureau's study focused on three areas, the first of which involve design standards and requirements.

The prevailing design standards for public works in Hong Kong follow established international practices but with additional requirements tailored to suit local conditions, which include a densely populated city with hilly terrain and difficult geological conditions.



Testing a carbon fiber composite strip's tensile strength for use in reinforced concrete.

Piling on the complications is the fact that most of our buildings, be it commercial or residential, are towering blocks that require robust foundations.

Access roads are mostly built on narrow strips, many requiring viaducts to circumvent existing structures or topography.

Also, some of our design loading requirements are different from other cities.

For example, the floor loading for retail stores is five kilopascals in Hong Kong, compared to 2.5 to four kPa in the mainland and many other cities.

These special conditions all add up to much higher costs compared to other cities with their relatively flat land and open spaces.

There is room for relaxing these regulatory demands while maintaining high levels of safety for occupants.

Second, with our comprehensive quality control system, standards and requirements for construction materials are stringent.

However, it is reassuring to see that, fol-



Workers carry out concreting work for foundation piles.



Loads are added on to hydraulic jacks to test foundation piles.



A mixer lorry unloads concrete.



The bearing capacity of rocks is reviewed with the help of a suite of instrumented foundation load tests.

lowing meticulous studies conducted by the SAR administration, the foundation capacity of good quality rock has gradually been updated by 30 to 50 percent.

This is encouraging as advancements in construction methods and materials have already paved the way for foundation piles to be a lot stronger with consistent built quality without compromising safety.

Third, our standards and specifications for construction products and equipment were written based on the technology of many decades ago.

There is now a lot of room for them to be updated to incorporate the arrival of modern technology.

For example, electrical and mechanical equipment, such as sewage treatment plants, medical equipment and chillers for air-conditioning plants, have seen a lot of updates and tremendous improvements over the years.

Revising specifications to incorporate such developments will allow a new range of efficient equipment to be approved, bringing capital cost reductions of at least 20 to 30 percent while achieving superior operating performance.

On top of these, the institute has spearheaded innovative applications of new technology to enhance productivity, cost-effectiveness and site safety performance.

It will continue to focus on three main development directions: applied research and development, reviewing and uplifting standards.

It also provides accreditation, certification and testing facilities to offer full support to the construction industry.

To take full advantage of the numerous research work being carried out in local universities, the institute will collaborate with them to review and optimize design loading requirements of buildings, taking into account the updated requirements such as wind and floor loads.

It also prioritizes the reviews of different established standards for early adoption to achieve cost savings.

We are glad to see the Development Bureau exerting great efforts to examine ways of improving cost-efficiency, both in construction and the ensuing operating and maintenance regime.

This will be a long and laborious process, but hopefully, it will help to keep our construction activities competitive, ensuring top quality while still providing new infrastructure at affordable cost.

**Veteran engineer Edmund Leung Kwong-ho casts an expert eye over features of modern life**



Hong Kong athletes enjoy themselves in Harbin. XINHUA

## Harbin sees highs for HK, China and Winter Games

The 9th Asian Winter Games illuminated the frozen city of Harbin, Heilongjiang, from February 7 to 14, transforming it into a vibrant winter sports hub.

President Xi Jinping opened the Games, welcoming more than 1,200 athletes from 34 Asian countries and regions.

The breathtaking opening ceremony captivated audiences with a dazzling fusion of youth performances, augmented reality, and advanced multimedia, showcasing Harbin's rich intangible cultural heritage and artistic traditions.

This seamless blend of Chinese traditions and cutting-edge technology highlighted the city's unique charm on the global stage.

The Hong Kong, China, delegation,

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led by flag-bearers alpine skier Adrian Yung Hau-tuen and speed skater Lam Ching-yan, made history with our largest-ever team of 74 athletes.

Competing in curling and alpine skiing for the first time, Hong Kong has added a significant chapter to its sporting legacy.

Although medals eluded the team, the athletes showcased resilience and determination, representing the city with pride in a highly competitive field.

China dominated the medal table, claiming a record-tying haul of 32 gold, 27 silver and 26 bronze medals.

This achievement matched

Kazakhstan's gold medal record at the 7th Asian Winter Games. South Korea and Japan followed in second and third place, respectively.

Nine delegations celebrated at least one medal, underscoring the Games' growing inclusivity.

Notably, the participation of Saudi Arabia and Cambodia highlighted the expanding reach of winter sports across the continent.

The athletes performed extraordinarily, achieved personal milestones, and formed enduring friendships.

The Games, which reached over 300 million viewers, showcased their exceptional talent.

They inspired a new generation of winter sports enthusiasts, leaving a legacy of unity and excitement.

Harbin's historical and cultural significance shone through as it hosted the Games for the second time.

Known for its iconic Ice and Snow Festival and unique blend of Chinese and Russian influences, Harbin provided an unforgettable backdrop for this celebration of winter sports.

The Games concluded with a friendship-themed closing ceremony attended by Premier Li Qiang.

The torch now passes to Neom, Saudi Arabia, which is set to host the 10th Asian Winter Games in 2029.

However, the Harbin Asian Winter Games will always be remembered as a spectacular celebration of sport, culture and the enduring magic of winter.

**Bernard Charnwut Chan is chairman of Tai Kwun Culture & Arts Co Ltd.**