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## Press Release

### [Gammon's commitment in innovation earns industry recognition](#)

**16 Jan 2018**

Gammon Construction Limited ('Gammon') earned recognition from CIC Innovation Award in appreciation of its long-term innovation pursuit. The award is organised by Construction Industry Council in rewarding new technologies and scientific breakthrough in the construction industry.

Partnered with the Hong Kong Polytechnic University (PolyU), the Bio-Inspired Anti-Vibration Exoskeleton (BIAVE) has won the First Prize of Construction Safety; while the Gammon invented "K-Frame" has secured the Second Prize of Construction Productivity.

#### **Bio-Inspired Anti-Vibration Exoskeleton**

Hand-held electric breaker is one of the most commonly used portable tools in construction industry. Prolonged exposure to the vibration may cause blood-circulation failures in the fingers, a condition known as white vibration finger. The damage can also include development of carpal tunnel syndrome. To alleviate this problem, a BIAVE has been developed by PolyU to prevent hand-arm occupational diseases among construction workers.

BIAVE can significantly reduce the vibration transmissibility from tools to operators without sacrificing demolition efficiency and increasing handling complexity. The innovative anti-vibration structure can be installed with different jackhammers or road breakers of different size and weight, it is easy to install, operate and handle.

On site trial of the performance of the exoskeleton was conducted in Gammon's project sites. A remarkable result is received that hand arm vibration has been reduced by 90%.

#### **New Machines to enhance productivity of bridge construction**

Gammon has developed a new range of machines to benefit the erection of segmental bridges, in terms of cost efficiency, productivity and sustainability. These machines feature the K-Frame with its signature 'K' shape and exoskeleton structure, enabling multifunction capability with a high lifting power to self-weight ratio of more than 2 to 1.

This new range of machines was invented and implemented in Hong Kong and is assembled from a common parts library of interchangeable modules. This enables the erection of virtually all types of segmental bridge, irrespective of curvature. This has been applied at the Tuen Mun-Chek Lap Kok Link project and is currently erecting spans up to 200m long with segments weighing up to 240 tonnes, relieving the need for traditional machines, notably launching gantries.

Launching, straddle carrying and segment movements are all achieved using a dedicated hydraulic control system, minimising operator skills and training requirements.

"Innovation is at the core of Gammon culture. We shall hold onto the spirit to further enhance productivity and safety in the industry, as well as to lower the construction cost", said Thomas Ho, Chief Executive of Gammon.

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