



[Immediate Release]

INNO@CHUNWO SUCCEEDS IN DEVELOPING RAPID REPAIRING MORTAR MATERIALS ENHANCES EFFICIENCY OF REPAIRING OLD BUILDINGS APPLIES A.I. TECHNOLOGY FLEXIBLY TO IMPROVE SAFETY OF CONSTRUCTION WORKS

Promotes Development of Innovative Technology Leads Construction Industry into a New Era

(Hong Kong, 21 January 2019) – Inno@ChunWo, established by Chun Wo Development Holdings Limited ("Chun Wo"), hosted an announcement on innovative technology at InnoCentre today. Since 2016, Inno@ChunWo has been active in collaborating with different universities and technology research companies and its hard work has been rewarded with the successful development of Rapid Repairing Mortar Materials to enhance the maintenance efficiency of ageing buildings. Meanwhile, Inno@ChunWo has successfully utilized Artificial Intelligence (A.I.) technology to improve construction safety. Mr Dominic Pang, Chairman of Asia Allied Infrastructure Holdings Limited ("AAI"), Sr. Stephen Lee, Chief Executive Officer of Chun Wo Construction Holdings Company Limited, Mr. David Lau, the Deputy Chief Operating Officer of Chun Wo Construction Holdings Company Limited, and R&D team members were present at the announcement to explain Inno@ChunWo's latest R&D achievements.

R²M² is a collaborative research project under the Innovation and Technology Fund, undertaken by **Chun Wo**, the **Hong Kong University of Science and Technology** (HKUST) and the **Nano and Advanced Materials Institute Limited** (NAMI). Comparing to the conventional method, R²M² offers a safer and faster solution for repairing concrete spalling – an issue commonly seen in Hong Kong's ageing buildings. R²M² is a stainless-steel fiber reinforced mortar that recovers the lost load-carrying capacity of corroded rebars by simply patching alone. It mitigates the need for lapping a new rebar and breaking a large volume of good concrete on both sides of the corroded region for lap length. In short, it simplifies the conventional repairing procedures, shortens the repair time and generates less waste, noise and dust nuisance to the property owners.

Furthermore, **Chun Wo** is working closely with an oversea consultant, **Indus.ai**, to utilize big data and artificial intelligence in construction. For safety, computer vision is used to track the correct use of safety helmets and reflective vests of workers, with non-compliance alerts sent to management instantly for corrective action. For project management, the recognition system can be improved through machine learning and are able to track up to 8 numbers of excavators

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concurrently. The construction plant efficiency and productivity can be seen by the management for timely decisions. Looking forward, Chun Wo plans to develop the system into an effective resource allocation and management tool. The aim is to track worker location and construction progress, with Building Information Modeling (BIM) integration. The safety features will also be expanded by developing user-defined no-go zone with intrusion alerts, safety items recognition and heavy-lifting non-compliance detection. Artificial intelligence provides unbiased information to frontline staff and management for instant action, which helps prevent accidents and improve occupational health and safety in the construction industry.

Mr Dominic Pang, Chairman of AAI, said, "The Group has been dedicated to developing innovative technologies for the construction industry over the years. We are truly encouraged by its success in developing the new mortar material and A.I. applications. Going forward, we will keep pushing forward with developing innovative technologies for the industry, contribute to the future of the local construction industry and create greater value to the benefit of the general public in the city."

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Photo caption:

Photo 1



(Left to right) Mr. Gyubok Baik, Product Manager of Indus.ai; Prof Henry Chung, Professor of Department of Electronic Engineering, City University of Hong Kong; Prof Christopher Leung, Professor of Department of Civil and Environmental Engineering, Hong Kong University of Science and Technology; Sr. Stephen Lee, Chief Executive Officer of Chun Wo Construction Holdings Company Limited; Mr. Dominic Pang, Chairman of AAI; Mr. David Lau, the Deputy Chief Operating Officer of Chun Wo Construction Holdings Company Limited; Mr. Gary Chou, General Manager of Chun Wo Construction Holdings Company Limited; Prof Darwin Lau, Professor of Mechanical and Automation Engineering, Chinese University of Hong Kong and Mr. Ivan Sham, Director of Research development of Nano and Advanced Materials Institute Limited attend the announcement to explain Inno@ChunWo's R&D achievements.



Photo 2



Prof Christopher Leung, Professor of Department of Civil and Environmental Engineering of Hong Kong University of Science and Technology introduces R²M² Rapid Repairing Mortar Materials.



Photo 3



Mr. Gyubok Baik, Product Manager of Indus.ai; Mr. Kelvin To, Divisional Director of Construction Services Division of Chun Wo; Mr. David Lau, the Deputy Chief Operating Officer of Chun Wo; Prof Christopher Leung, Professor of Department of Civil and Environmental Engineering, Hong Kong University of Science and Technology and Mr. Ivan Sham, Director of Research development of Nano and Advanced Materials Institute Limited hosted the QA session. INNO @CHUNWO Succeeds in developing rapid repairing mortar materials Enhances efficiency of repairing old buildings Applies Technology flexibly to improve of construction works 21 January 2019

Asia Allied Infrastructure Holdings Limited (stock code: 00711.HK)

Asia Allied Infrastructure Holdings Limited ("Asia Allied Infrastructure") is listed on the Main Board of the Hong Kong Stock Exchange under stock code 00711. It is engaged in various businesses including construction engineering and management, property development and assets leasing, security services and property management. With Hong Kong as its business development base, Asia Allied Infrastructure is also exploring development opportunities with Asia as the main focus, as well as in overseas markets. Its subsidiary "Chun Wo" is a renowned construction contractor and property developer in Hong Kong, which enables Asia Allied Infrastructure to capitalise on that company's solid construction experience and professional capabilities to seize the opportunities for infrastructure development in countries nearby the "Greater Bay Area", and, ultimately, to increase overall profitability and create higher investment value.

Chun Wo Development Holdings Limited

Chun Wo Development Holdings Limited ("Chun Wo") was founded in 1968 and is a key subsidiary of Asia Allied Infrastructure Holdings Limited (stock code: 00711.HK). The Company is principally engaged in the core construction and property development businesses with the professional capability to undertake large integrated construction projects. Recent examples of large infrastructure projects in Hong Kong within which the Company has undertaken works include the Central-Wan Chai Bypass, Liantang/Heung Yuen Wai Boundary Infrastructure, the Hong Kong-Zhuhai-Macao Bridge Passenger Clearance Building, the Guangzhou-Shenzhen-Hong Kong Express Rail Link (Hong Kong Section) and the MTR Shatin to Central Link. With deep roots in Hong Kong for nearly 50 years, Chun Wo has accumulated extensive experience and a strong position in the construction sector enabling it to expand business to countries along the "Belt & Road" route in Southeast Asia. Examples of such expansion are the acquisition of a construction and engineering consultancy in Singapore and the waterway bridge design and construction projects undertaken in the Philippines during recent years.

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