



Deputy Director of Housing
(Development & Construction)

Message from
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Construction has long been considered a high-risk industry due to its complex nature and the various kinds of dangerous processes involved. Thanks to the industry's efforts in ensuring site safety over the years, the overall safety performance has been improved, with a continuous decline in the overall industry accident rate per 1 000 workers. Compared with the situation two decades ago, both the number of accidents and the accident rate per 1 000 workers in Housing Authority (HA) works saw a reduction of more than 70%. In addition, the accident rate of HA works has remained in the single digits for the past decade, while the industry accident rate also decreased to around 30 per 1 000 workers. In order to promote a higher safety standard among industry partners, the HA lowered the upper limit of target accident rate from 15 to 12 per 1 000 workers in 2008 and then from 12 to nine in 2016. This indicates the strong determination of HA to reduce industrial accidents.

However, the number of fatalities in the industry has been hovering around 20 cases per year on average in the past decade. The figure reflects that there is room for improvement in site safety. The tower crane accident that occurred earlier in construction industry has caused casualties. It is really heart-rending. We must do our best to take safety measures to prevent a recurrence of the tragedy. As construction workers are getting older (currently over 50 years old on average), coupled with the increasing volume of construction works and the very high social expectation of speedy delivery of projects, both the HA and the industry are facing a growing challenge in terms of aging and shortage of manpower. For enhancing quantity, speed and efficiency in housing supply, site safety must be given great attention, all of us are required to manage properly the risk of accidents on site.

The HA, playing the role of a landlord, cares much about the safety and health of its frontline works staff. Sustained efforts are made to review the effectiveness of safety measures, identify room for improvement and minimise risks so as to prevent accidents. The best method to prevent accidents is to manage risks at source. We all know that the HA has adopted a three-pronged strategy for site safety management.

Firstly, it is the implementation of procurement strategy and performance monitoring mechanisms with incentives and sanctions, which enables the HA to select competent contractors for tendering. The HA can, through list management, pick suitable contractors to deliver services for us. In order to be eligible for inclusion in the lists for the tendering of HA works, contractors need to possess relevant works experience, safety accreditation such as ISO 45001, technical capability,



financial support, etc. All of the above measures are taken to select the most suitable contractor for HA works. As we all know, serious accidents and the conviction of breaching safety regulations are just passive safety indicators. The HA therefore places great emphasis on the mechanism for monitoring contractors' safety performance in daily works. We introduced the Safety Auditing System Version 1.7, the Lift and Escalator Safety Auditing System Version 1.3 and the Surprise Safety Inspection Programme (17th Edition) for New Works this year. Amendments were also made to a number of site safety assessment standards in the Performance Assessment Scoring Systems for building works and for foundation works. Upon implementation of these enhancement measures and with the support of relevant stakeholders, we will definitely be able to go further to prevent accidents on site. Performance Assessment Scoring Systems, Safety Auditing System and Surprise Safety Inspection Programme are essential tools of Housing Authority in monitoring the safety performance of works contractors and they all are beyond the legal requirements. Besides, we attach importance to the monitoring of contractors' performance during the construction process and will take regulatory actions against poor contractors. If a contractor participating in a tender exercise was recently convicted of offences pursuant to safety legislation or even involved in serious incidents / fatal industrial accidents, the HA will deduct the scores awarded to his/her tender according to the mechanism so as to reflect the contractor's shortcomings and reduce his/her chance of success in the tender exercise. We may also arrange an independent safety audit against them. If contractors have caused a major safety incident and the HA has doubts about their safety management capability, we can suspend their tendering for HA works until they have taken appropriate corrective actions to restore the HA's confidence in them.

Secondly, the HA also endeavours to safeguard the working environment and health on site through contract requirement and administration enhancement. We also implement safety practices and measures with standards higher than statutory requirements. This year, multiple measures have been introduced for New Works to improve the working environment on site, reinforce site safety management and raise safety awareness within the industry.

We know that construction site conditions are always changing, and it would be very useful if the safety of equipment used in a working environment is enhanced. Artificial intelligence images or Internet of Things sensors can be employed to detect whether workers have entered hazardous areas or mobile plant operating areas, and whether they have worn a reflective vest and a safety helmet. Through our system, we can send alerts to on-site workers and management staff in real time. Putting all the information collected by sensors and cameras into a dashboard will facilitate contractors to conduct analyses and arrange targeted training. We will also make use of the facial recognition system and the radio frequency identification system to monitor the operation of material hoists. Metal frames will be added to elevating work platforms while angle grinders be equipped with safety guards, auxiliary handles and safety devices. The application of wireless hand-held power tool will be expanded, lockable swing doors and a lighting system to indicate the usage are fit into temporary refuse chutes. Apart from the application of technology, we will, for the sake of workers' health, provide health measurement tools for them to monitor their health conditions. Workers exposed under the sun for long hours will also be provided with ultraviolet-proof goggles.

Recently, the industry has paid great attention to the safety of temporary works, and we have also paid great attention to the risks involved in temporary works. Therefore, I would like to mention that our contract also regulates temporary works, which requires the contractor to appoint a technically competent person of T3 grade to act as the coordinator of temporary works. For some established and large-scale temporary works, the contractor shall submit the temporary works design and construction plan issued by the registered structural engineer to the contract manager to ensure the safety and stability of the temporary works.

New initiatives are introduced to strengthen safety management where contractors are required to put in place electronic application for and electronic processing of permits to work, and to visualise the method statement of high risk activities and safety work procedures. We have also incorporated the requirement of attending new Silver Card courses organised by the Construction Industry Council (CIC) into contractual clauses and require newly-joined lifting safety supervisors to hold a relevant certificate for the post and draw up a checklist for examining cranes.

We have introduced new measures to strengthen safety management, requiring contractors to digitize work permit application and processing procedures, and visualize construction plans and safe working procedures for high-risk processes. We have also included the new Silver Card course requirements of the Construction Industry Council. According to the contract specifications, new lifting safety supervisors must hold a lifting safety supervisor certificate and formulate a lifting inspection checklist.

Raising safety awareness is a key activity. Our contractors are required to continuously provide safety training for their workers and teach them about correct practices. In addition to arranging induction safety training for workers new to the site, contractors have to conduct hazard identification before commencement of work daily, a tool box talk weekly and a lunchtime's safety talk monthly. For HA's works contracts, a Safety Climate Index Survey must be carried out to understand the awareness and recognition of site safety management among management staff, supervisors and workers so that contractors can formulate improvement measures. Contractors are also required to implement the Safe Work Behaviour Programme to identify the causes for unsafe behaviour and then work out an action plan. We have revised our training requirements since the fourth quarter this year. Site management staff are required to complete a 7-hour Safety Training Refresher Course; frontline site supervisors to complete a 12-hour Enhancement Course for Construction Safety Supervisors; electric arc welders and gas welders to obtain the qualification at intermediate level and at least to register as semi-skilled workers. Workers involved in unsafe behaviour must receive safety training within 7 days under the guidance of a ganger. For workers and competent persons who are engaged in underground drainage works in a confined space, they must complete the 1-day Safety Training Course organised by the CIC for those working in confined spaces.



Thirdly, it is about “research, training and promotion”. The HA holds the Safety Forum together with its industry partners every year with a view to providing a platform for stakeholders to share their experiences in construction safety. Moreover, we actively join safety committees and ad hoc working groups set up by our partner organisations, and provide support to various safety competitions. We also encourage contractors to join safety activities and competitions held by the industry. In order to encourage contractors to participate in the competitions, the HA implements the Pay for Safety Scheme and disseminate safety information via the Site Safety Website so as to foster a safety culture and prevent accidents.

To tie in with the substantial increase of housing production in the future, the HA will expand the use of the Design for Manufacture and Assembly with Modular Integrated Construction in developing residential blocks. In addition, the building services design team is now working with the Federation of Electrical and Mechanical Contractors to examine the application of the Multi-Trade Integrated Mechanical, Electrical and Plumbing in public housing projects. It is hoped that, by adopting new methods and technologies, we can standardise the design of components which can be easily manufactured and assembled in a factory before delivery to construction sites for installation, thereby reducing the volume of on-site works and enhancing site safety.

I would like to call on all stakeholders in the industry to discharge their duties, work together and achieve the target of “accident prevention for safeguarding lives”. It is crucial to go to work happily and return home safely. May I wish you all well and safe on construction sites. Thank you.