

THOSE WERE THE DAYS....

A brief account on OSH development in Hong Kong after World War II

Ian Wolfe

B Sc (Essex), M Sc (Aston)

Background

Industry in colonial Hong Kong dates back to the Victorian times, in the 19th Century, industrial activities were often related to the 'daily needs' of local population, such as boat building, timber saw mills, quarrying, blacksmithing and making of apparels etc. It was not until cessation of Japanese occupation after the World War II and beginning of communist rule in the mainland that paved the way for post-war industry boom - the entrepreneurs migrated from mainland China and ventured their capital in Hong Kong, many of them made a fortune through exporting produces manufactured in plants set up in this post-war city.

In early 50s, with extensive land reclamation in areas like Kwun Tong and Tsuen Wan, the local industry started to flourish; contrary to developing large industrial premises with pitched roofs and north-facing windows once popular in the West, high rise blocks were often built to cater for the small-scale but highly efficient factories, with the latter making diversified products to suit the ever-changing interest of overseas buyers. It was not unusual to see one shop equipped with injection molding machines producing thousands of parts for household appliances, while the shop situated next to this one can be found with dozens of sewing machines at work, with workers busily making garments for a foreign order. But one thing in common among these small shops is they are usually congested, machines are often dangerous to workers, fire risk is high in the premises but people's awareness on safety and health is rather low.

The post-war economic development was fast thanks to the Korean War and thriving international trade, despite the local demand of manufactured goods only increased steadily. Trading with European countries and the US was the mainstream export business for decades since post-WW II, yet unfortunately the Western influence in keeping a safe and healthy working environment was almost insignificant until the 80s, so late that by the time when good manufacturing practice sounds common in the region, majority of the enterprises had moved across the border and established plants in the PRD (珠三角) area.

The Development of OSH Law Enforcement

What was the situation in Hong Kong from post-war till recently? After the WW II and resumption of sovereignty by the Empire, regulating labour safety and welfare in factories was still under the Factories and Workshops Ordinance (No.18 of 1937) which came into force on 1st January 1938. This is an English-style law, for example, regarding protection from dangerous parts of machinery, regulation 13(a) and (b) follows closely with sections 12 and 14 of the Factories Act 1937 of England. Law enforcement was by the Office of Protection of Labour, this Office was governed by the Chairman of Urban Council in the post-war era, and Labour Inspectors (勞工督察) were transferred from the department dealing with public health in the city. Then came an important change - the Factories and Industrial Undertakings Ordinance (FIUO) was enacted in 29th September 1955, again its legal framework based on the Factories Act of England. In 1963, after the establishment of a Factory Inspectorate Division in Labour Department, safety inspection by Labour Inspectors had become the job of the Factory Inspectors (工廠督察). In those days, the recruited trainees were mostly secondary school leavers; and since the 70s, were mostly Technical College or Polytechnic graduates. Training those newly recruited inspectors was given in-house by the Industrial Training & Safety Officer, such as Mr. Arthur Quinn who came from abroad UK in 1956, after serving at the then Ministry of Labour and National Service. The experienced Factory Inspectors also had on-job safety training attachment to the Her Majesty's Factory Inspectorate (HMFI) in Great Britain. The training of Factory Inspectors had remained much the same pattern until late 70s when the Labour Department, after having recommendation from the then HMFI, Mr. John P. Wood, has initiated UK study missions targeted at sending abroad selected members of the team – Factory Inspectors at Divisional grade with good appraisals had the chance to enroll for an OSH course offered by the University of Aston in Birmingham, this practice of sending Inspectors to Aston continued for some years. Up to the late 70s, those who served in the Factory Inspectorate can be said as the only group of persons who have comprehensive and authoritative knowledge in industrial safety.

OSH in the Industrial Era

As time goes by, the local industry sector has gradually transformed from mainly manufacturing 'basic necessities' such as textile weaving, ship building and making

metal ware to fast-moving consumer goods (FMCG) like plastic commodities, toys, wigs, electrical equipment, watches and merchandise for Christmas. It was the change in this period that contributed to workers of that era most of the problems in industrial safety and occupational health. Disabling cases due to OSH hazards were common, from asbestosis, silicosis, chrome ulcer, industrial dermatitis, poisoning by solvent or metal to the lost of hearing, back injury, amputation of limbs, blindness and even fallen or scalded to death.

The underlying reasons for so many OSH problems occurred at that time among the local workforce are lacking a sense of labour protection at work, and indifference in industrial safety law. These, together with ignorance about the hazardous properties of materials handled, had contributed to a number of catastrophic accidents happen in many industrial undertakings, and often led to lost of human lives. Tragedies reported in the media were numerous, remarkable ones include the Jumbo Floating Restaurant (珍寶海鮮舫) fire in October 1971, with 34 persons killed in a fire due to the use of methyl ethyl ketone peroxide (MEKP) in fiberglass moldings when doing decorative fitting-out; the killing of a Hong Kong Telephone worker inside a manhole on 19th September 1984 at Kwok Shui Road, caused by in-rush of hot water from a broken drain; the San Po Kong factory 'Mabuchi Industry Limited' incident (萬寶至事件) in January 1983, with almost 200 workers overcome by ozone and phosgene emission generated from the UV decomposition of perchloroethylene vapor during a printing process; the explosion in 'Cipel Marco Fur Processing Co., Ltd.' (馬可硝皮廠) in Kwai Chung on the night of 8th October 1986, due to the use of hydrocarbon solvents that cost 14 lives and seriously burnt many others. Following occurrence of the last two accidents, enquiries on measures to prevent further chemical injuries and explosions in factories were made in the Legislative Council meetings, and this led to enactment of the F&IU (Dangerous Substances) Regulations in late 1988.

The Work of the Factory Inspectorate

What had the government done in those years? In the following one-and-a-half decade since enactment of FIUO in 1955, the nature and number of enacted safety regulations, mostly in prescriptive form, had not changed much. But from the early 70s till present, new OSH regulations appeared on the gazette year after year. Even as early as in 1986, there were already 24 pieces of F&IU regulations covering the safety needs of those days. Yet the shortcoming was on the side of enforcement, there were about 120 Factory Inspectors in 1977 and 165 in 1981, but the increase to 193 Factory

Inspectors in 1986 had apparently failed to cope with the growth in number of industrial undertakings and intricacy of new technologies adopted. Yet interestingly, during the glorious days of manufacturing industry, the Labour Department was keen in the design of machine guards despite the Inspectorate's workload was huge in performing law enforcement visits to factories. The interest in design of guarding was probably due to high number of amputation cases to fingers and limbs as a result of operating badly guarded machines like power press etc. This can be seen recorded in court case [The Queen vs So Kwok Yau] (Magistracy Criminal Appeal 280 of 1986) - the Factory Inspectorate even went to some depths in invention of machine guarding for industry to adopt (a double-arm sweep-away guard)! More to say, in the early 70s, Labour Department also had an Air Pollution Control Unit responsible for abatement of smoke discharged from fuel-fired boilers and furnaces etc, a task that would have undertaken by environmental protection officials nowadays! The workload of Factory Inspectors was particularly heavy when another labor-intensive industry with grave safety concern – the construction industry, started to rocket in both the volume of business and the size of workforce employed. The grow in number of construction sites eventually driven the Factory Inspectorate to establish the BEC division, this move enabled allotment of manpower with specialized OSH knowledge to take care of workers in the building and engineering construction trades. Yet on the side of industrial health & hygiene, even though the law that requires official reporting of occupational deceases was there since 1965, Factory Inspectors asking for workplace air monitoring or calling for occupational health advise after a factory visit was not common, despite there were some Industrial Hygienists (工業衛生師) and Medical Practitioners trained in the London School of Hygiene and Tropical Medicine.

The Development of Tripartite Safety Committees

Meanwhile, the society reckon that law enforcement cannot be the sole means to rely on in fostering a safer working environment; after taking recommendation from the then Labour Advisor Mr. J.A. Linehan, a tripartite body – Committee on Industrial Safety & Accident Prevention (CISAP) was formed in 1978 under the auspices of the Labor Advisory Board (勞工顧問委員會). Initially CISAP was with 4 industry-based sub-committees (textile, construction, ship building & repairing and also plastics); these represented the major types of industry that faced with significant OSH issues at the time. By 1982, the number of sub-committees had increased to six, but it was not until April 1989 that a committee of more comprehensive nature – Committee on Industrial Safety & Health was formed. By January 1997, it has become known as the

Committee on Occupational Safety & Health, thus having a wider spectrum of labour coverage and also with an even broader representation – there are 6 representatives from employers, 6 from employees, 3 from the OSH professional organizations, one from the OSH Council, one Assistant Commissioner for Labour and one occupational health consultant. This Committee serves to review the current OSH standard, advice on the measures to be adopted by the Labour Department with respect to OSH legislative enforcement, and advice on legislative changes concerning OSH. In 2002 the Committee had proposed to hold the principle contractor (總承建商) and the sub-contractor jointly and severally liable for safety offences. Consequently in 2003, the Construction Sites (Safety) Regulation was amended to extend the duties imposed on the principal contractor to other contractors who control the way any construction work is carried out, and this had created a significant impact to stakeholders in the contractors' world with regard to managing OSH on construction sites.

OSH Training and the Legal Implications

For a long time, people believe that enhancing the level of OSH knowledge among workers will help promoting safety and health at work. In this regard, the government had organized a lot of OSH training courses in the past, as far back as in late 50s the Industrial Safety Training Center (ISTC - 工業安全訓練中心) was established, the Center was once set up on the 3/F of Canton Road Government Offices, Yau Ma Tei, before moving to Harbour Building, Central, in the mid-80s. Even in those days a comprehensive range of safety-related short courses were offered free of charge to people employed in industries. Courses were run throughout the year, leading to Abrasive Wheel Safety Certificate, Manual Handling Safety Certificate and Safety Supervisor Certificate etc. Another ISTC course worth mentioning is the Safety Officer Certificate which was very rare; this course was however short-lived due to the then Hong Kong Polytechnic started to offer a part-time course from 1979 - the 'Certificate of Proficiency in Industrial Safety'. ISTC has been re-named and now known as the Labour Department Occupational Safety & Health Training Center.

Since enactment of the Health & Safety at Work etc. Act 1974 (HASAWA) in England, the HK government has already planned for an initiative, and this time with legal backing, towards the goal of practicing self-regulation among the local industries to make workplaces safe and healthy for all to work. Consequently, the Factories and Industrial Undertakings Ordinance was amended in 1989 to incorporate the 'general duties' (一般性責任) provisions, often referred to as Sections 6A & 6B which laid

down a broad framework on exercising self-regulation. In 1990, the Chief Factory Inspector Mr. Ip Yuk Lun was asked in an OSH seminar held in Lei Yue Mun Park (formerly the Lyemun Barracks) – why it took so many years to adopt the same idea despite the Robens Report leading to HASAWA (by Lord Robens, July 1972) was published in the early 70s? He merely uttered a few words saying that the local working culture and practice are very different from those in the UK, so required considerable time to adjust. Indeed the Labour Department had worked (waited) for more than 15 years to get it ready! The notion of ‘general duties’ has far-reaching effect – management can become guilty of an OSH offence if there is an accident caused by worker’s lack of training, information or supervision, even the workplace or equipment in question has not in itself contravened any OSH legislation.

Registration of Safety Officers

Late in the 80s there was an important development in the OSH profession; it is the compulsory employment of Safety Officers in some trades and the registration of Safety Officers that had come to force. As early as in late 1981, the then Chief Factory Inspector, Mr. Chan Siu-Lap had revealed in the media about the government’s intention to set up a register of Safety Officers. Yet in 1987, when the registration scheme was initiated to match enactment of the F&IU (SO & SS) Regulation, not too many in the profession were keen in having their names on the list. Registration was at that time regarded as a means the government use to restrict in-service Safety Officers their freedom to practice, thus whereas many have already got qualification and with adequate on-job exposure to OSH, few were registered in the first year. As a result, there was an apparent concern among the government officials at that time about the small number of Safety Officers on the register, since this may lead to an issue in implementing compulsory employment of Registered Safety Officers (RSO) in the construction industry. Strangely, until the regulation was amended in 2002, it was possible for other professionals, such as engineers or scientists with a degree, but without any formal Safety Officer training, to become registered as Safety Officers! Another impact of the 2002 amendment is - in order to keep ones name on the register, Registered Safety Officers are required to participate in the 4-year CPD (持續進修) cycle. Because of this change, the number of RSO reduced from more than 3000 to much less than 2000, despite the F&IU (SO & SS) Regulation had already amended to include employing RSO in the container handling industry in January 2004.

Formation of the Occupational Safety & Health Council

Again in the late 80s, there was an important change in provision of OSH education, training, and promotion; this was the birth of the Occupational Safety and Health Council (OSHC) in 22nd September 1988. The Council was set up with endorsement of various parties, both from inside the government and from parties representing public interests. As early as 1976, the Chinese Manufacturers' Association of HK (CMA - 香港中華廠商聯合會) already suggested the need of such an organization. Setting up of the Council has been discussed in a number of occasions in Legislative Council meetings, and undoubtedly the chemical gassing and factory explosion disasters happened in late 80s have exerted pressure to the law makers, leading to finally giving a green light to the establishment of OSHC. Contrary to the ISTC which is totally government funded, funding for the Council is levied directly from the employees compensation insurance premiums, a compromised move not to the entire satisfaction of the insurance industry. Since the birth of OSHC, most of the training courses still offered by ISTC have been restricted to telling what the regulations require. On the other hand, courses offered by OSHC are more wide-ranged, although the latter often charges a nominal course fee. OSHC has been much helpful in serving the lay public, employing a number of well learnt and seasoned consultants to provide specialist OSH information; and to organize public seminars and promotions. Notably the Chief Safety Consultant Dr. Louisa T.L. Wong, the longest serving consultant in OSHC since 1988, she has a medical background; she is also an occupational hygienist by training and an expert in noise and hearing conservation. OSH training for workers in construction was however much relied upon another statutory body established in the 70s – the then CITA (建造業訓練局). Apart from the Construction Safety Officer course running since mid-80s, a large proportion of 'Green Cards' (平安卡) on market were once issued by CITA, but after gazetting the mandatory basic safety training requirement for construction and container handling industries in 2002, the private OSH training providers have out numbered CITA and OSHC in Green Card issuance.

Towards the Concept of OSH Systems Management

The year 1995 is another important milestone in OSH development – HK government put the self-regulation concept one step further and re-affirmed the principle that the primary responsibility for OSH rests with those who create the risks and those who work with such risks, i.e. the proprietors and workers. A comprehensive review of industrial safety and health was conducted, result of this review has profound implications for the subsequent development of safety strategy and the way OSH law

is enforced in the more recent years. Following this review, improving OSH moved gradually from an enforcement approach to a safety management approach. In line with this drastic change, on 24th November 1999, the Legislative Council approved the F&IU (Safety Management) Regulation, the objective of which is to advocate the use of a systems approach to manage safety and health in certain high-risk industries that employ 50 workers or more, and included construction projects when each has a contract value of HK\$100 million or more. Proprietors in this group are also required to engage the service of a Registered Safety Auditor (RSA) or reviewer to conduct regular audits / reviews, to ensure that the safety management system is implemented effectively. The invention of a new profession by the Labour Department, the RSA, is not without a story behind – since the F&IU (SO & SS) Regulation did not stipulate an RSO to carry out safety auditing, so a separate register for safety auditors has to be kept to cope with the F&IU (SM) Regulation! Auditors' registration has offered the experienced Safety Officers a seemingly promising career, consequently at the turn of last century, those Labour Department approved auditor training courses were having full classes and there were intakes after intakes. Yet in the recent years, auditing has become a standard practice and the number of RSA has reached a saturation point, interest in running auditor training courses among colleges and institutions has dropped significantly due to low enrolment rate. In the same period, suspension notices (SN) and improvement notices (IN) for enhancing the Labour Department's power in OSH law enforcement were also introduced.

Safety Management in Industries

What has the industry been doing concurrently to go along with development of OSH regulations? As early as mid-70s, when MTR Corporation was building the MIS Line (Modified Initial System) on the Kowloon side, contractors were under the MTRC contracts to employ Site Safety Officers. At that time tunneling was more dangerous than ever before, as construction workers often had to work for hours in underground shafts pressurized with compressed air. As a result, knowledge on decompression sickness and on the procedures for operating air-locks was common among Safety Officers in those days. MTR Corporation was at that time one of the few employers with stringent safety requirements, and did set a good example for others to follow. Mr. Les Lofthouse, the MTR construction safety man till completion of the Island Line in late 80s, is particularly worth remembering. In fact even back in the 70s, OSH was not new to major industry stakeholders in Hong Kong; the utilities undertakers already have a long history of employing safety staff to execute OSH functions. Yet

the ‘great step forward’ in OSH advancement only started during inception of ACP projects (機場核心計劃項目) in the early 90s. The huge scale of ACP projects means a systematic approach is required for good OSH management in construction sites. The then Secretary for Works Mr. Ronald James Blake, was one of those who spent much effort in creating a change towards better OSH on sites. In fact a substantial part of the Construction Site Safety Manual for ETWB (環境運輸及工務局) works was derived from the OSH policies and procedures developed in those days, including the requirement of auditing site safety by Accredited Safety Auditors (ASA) using the ‘Independent Safety Auditing Scheme’. From 1996, after a successful trial run in 3 government works contracts, independent safety auditing and the incentive scheme ‘Pay for Safety’ (pay the contractor for pre-priced safety items done 支付安全計劃), have become standard contractual clauses in sizable Works Bureau and Housing Authority projects. It is with much regret to see that the ‘Pay for Safety’ provision, originally created to encourage contractors to upgrade their OSH practice without compromising safety under the competitive tendering process, and was intended only to last briefly until contractors get used to maintaining a reasonable safety standard, has now turned to become a formal addendum to most contracts in the government construction projects! By 2005, even the private developers started to copy the same. In the manufacturing and service sectors, OSH development has been much customer driven, and the ISO accreditation was the main drive behind this. In late 90s, with the OSH Ordinance enacted to cover most trades, implementation of IMS (綜合管理系統) has become the industry norm, and conformance to OHSAS has upgraded the OSH standard significantly in business and industries not related to construction. Since then, the systems concept has deeply implanted in the mind of OSH professionals, with key issues like plan, do, check, act (PDCA) and audit with a view to achieving continuous improvement. SMS (安全管理系統) is now indispensable in sizable organizations, this led to emphasis on OSH policy development, safety training, keeping records, hazard analysis and auditing by a third party. As a result, an opportunity has emerged for the more able professionals in OSH to provide expert assistance. It is for this reason the number of safety consultants with general practice background has flourished. Since the millennium, dozens of these safety consultants are available for all sorts of OSH related works – ranging from systems auditing to assessment of risks to providing ‘confined space competent worker’ training. Yet consultants from more technical disciplines, for example those experts in air quality, chemical safety and noise, have benefited little from the OSH advancement, highly technical consultants such as Expert Organize Ltd. and EHS Consultants Ltd. are no longer in business, although they were big names in the past.

People and Associations in the OSH Profession

For the employed OSH professionals, where did they go from working as an advisor or inspector as stipulated in the F&IU (SO & SS) regulation? Long before there is a registration requirement, industrial safety professionals from the HK private sectors already formed associations to exchange information and views. HKOSHA, being the oldest association in Hong Kong for learned professionals from a broad spectrum of background, has been the platform in the past 3 decades for discussion of OSH issues. Those who have been in this profession long enough should be able to recall the old boys like Mr. William W.Y. Law (once with GHK), Dr. K.W. Fung (once with HKU), Dr. Sarah Mary S.T. Liao (once with EHS), Mr. Benson T.W. Yeung (once with CLP), Mr. C.K. Yu (once with HYF), Mr. Dennis K.H. Wong (with HKJC) and many others who served the association very well in those days, although they no longer remain in the OSH profession. William was Chairman of HKOSHA for a number of years; he was the first contractor Safety Manager came from Labour Department, the first MSc Industrial Safety degree holder in Hong Kong (Imperial College, UK), and the first Safety Manager having a career development disaster in the midst of his working life. William was ill and died in 1st December 1986, at the age of 52. So one can see even in the good old days, there was never a lack of high flyers in this profession, it is the OSH professionals themselves being the center of the driving force in enhancing the image of Safety Officers and Safety Auditors. Now there are around 20 learned OSH associations currently active in HK, yet these groups need consolidation of ideas from their own bright members, so that an influential body representing this profession can survive perpetually to serve the community.

The Challenge in Modern World

Workplace safety and health in the 21st century started to focus on the less salient OSH issues like work stress, indoor working environment, ergonomics, violence at work, hazards arising from nano science and viral infection. These necessitated the acquisition of multi-disciplinary knowledge and risk management concept to tackle future OSH problems. Fellow professionals should prepare to face the new challenges; and those OSH veterans whose mind still wandering around hand-dug caissons or spinning mills will soon have their office occupied by their successors.

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