

**Legislative Council Panel on Manpower  
Meeting on 19 April 2001**

**Proposed Factories and Industrial Undertakings  
(Gas Welding and Flame Cutting) Regulation**

**PURPOSE**

This paper informs Members of the Administration's proposal to make a new Factories and Industrial Undertakings (Gas Welding and Flame Cutting) Regulation under the Factories and Industrial Undertakings Ordinance, Cap. 59 ("FIUO") to introduce mandatory safety training for workers undertaking gas welding and flame cutting work.

**BACKGROUND**

**Gas Welding and Flame Cutting**

2. Gas welding and flame cutting means welding and cutting operations carried on with a flame produced by mixing a fuel gas and an oxidant gas in a blowpipe.

**Existing Control Measures**

3. At present, there is no specific legislation to regulate the use of gas welding and flame cutting equipment under the Occupational Safety and Health Ordinance and the FIUO. However, these two ordinances impose general duties on employers and proprietors to ensure the safety and health of their workers by, among other things, providing and maintaining plant and system of work that are safe and without risks to health, and providing the necessary safety information, instruction, training and supervision. These provisions apply to all work processes in a workplace, including gas welding and flame cutting.

## **Guidelines and Codes of Practice**

4. As part of its on-going efforts to promote safety and health at work, the Labour Department has issued various guidebooks and pamphlets to help duty-holders observe the relevant safety precautions. In respect of gas welding and flame cutting work, we have published safety guidelines and a code of practice. The code is issued by the Commissioner for Labour under Section 7A of the FIUO and has a special legal status. Although failure to observe any guidance given in the code is not in itself an offence, that failure may be taken by the court in criminal proceedings as a relevant factor in determining whether or not a person has breached any of the relevant provisions to which the code relates.

## **Need for Mandatory Safety Training**

5. Gas welding and flame cutting equipment is widely used in different industries including construction, shipbuilding and repair, vehicle repair, air-conditioning and refrigerating service, metal window and door installation, etc. because it is versatile, mobile and inexpensive. Due to the relative ease of its operation, it is sometimes indiscriminately and recklessly used by persons who lack the necessary safety knowledge and skills.

6. We consider that there is a need to require workers to attend a safety training course and possess a certificate issued by a recognized training body undertaking gas welding and flame cutting work. This is because -

- the operation may create serious hazards such as fire and explosion which may cause death or personal injuries not only to the worker but also other workers and even the public in addition to property damage;
- lack of or insufficient safety training is a common and important contributory factor of unsafe acts or unsafe conditions;
- mandatory safety training will enable operators to achieve the desired standards required for the safe use of the equipment.

7. Similar training and certification schemes have already been in place

for crane operators and workers working on suspended working platforms and will also apply to loadshifting machine operators on a date to be specified. From 1 May this year, workers in the construction and container handling industries will also be required to have received mandatory basic safety training.

## **PROPOSAL**

8. It is proposed that a new Regulation be made under the FIUO to provide for a safety training and certification scheme for workers undertaking gas welding and flame cutting work in industrial undertakings.

9. The main provisions of the proposed Regulation are set out below :

- (a) Any person performing gas welding and flame cutting work is required to complete an approved safety training course and possess a valid certificate. Through administrative measure, we will specify that the certificate is valid for 5 years. A person needs to attend a refresher course to renew the certificate;
- (b) The responsible person of an industrial undertaking shall ensure that every person possesses a valid certificate before he/she is allowed to perform any gas welding and flame cutting work;
- (c) The training course in (a) should be approved by the Commissioner for Labour;
- (d) Any person who performs gas welding and flame cutting work must not be less than 18 years of age;
- (e) Where a person is undergoing training in undertaking gas welding and flame cutting work and be under the supervision of a person who has obtained a relevant certificate, requirements in (a) and (d) shall not apply;
- (f) A person undertaking “gas welding and flame cutting” work should produce the valid certificate upon demand by an Occupational Safety Officer of the Labour Department. Failure to do so is an offence and

liable to a fine at Level 3 (currently \$10,000); and

- (g) A responsible person of an industrial undertaking who fails to ensure that a gas welding and flame cutting work is performed by a certified person commits an offence and is liable to a fine at level 5 (currently \$50,000). This penalty level is on par with that for similar offence under other Regulations made under the FIUO.

## **TRAINING FACILITIES**

10. The Vocational Training Council (VTC), the Construction Industry Training Authority (CITA) and the Occupational Safety and Health Council (OSHC) have pledged their intention to run the training course required under the proposed scheme. At present, the VTC provides several craft training courses on metal welding and cutting lasting from 2 to 5 days. These courses are primarily refresher courses targeted at experienced workers to upgrade their skills. For new trainees, the VTC and CITA offer several related full-time courses lasting from 3 months to 1 year. The curricula of these courses have already included some safety precautions in the operation of gas welding equipment. The VTC and the CITA intend to incorporate all the contents of the proposed safety training into their existing curricula to enable trainees who have successfully completed the courses to receive a certificate under the proposed scheme, upon approval by the Labour Department. Other organizations, e.g. workers' unions, individual establishments and contractors, etc., may also offer courses upon approval by the Labour Department.

11. The proposed mandatory safety training would last one full day. The CITA, VTC and OSHO together have the capacity to train 20,000 persons each year.

## **ECONOMIC IMPLICATIONS**

12. Gas welding and flame cutting is not a profession by itself, and it is hard to arrive at a precise figure of the number of persons who will need to be trained. Estimations put forward by the industry ranged from 4,000 to 30,000. After further consultation with the major training providers, we plan to adopt

40,000 as the estimated number of workers requiring training, to take into account persons who may be occasionally called upon to perform gas welding and flame cutting operations. As the combined training capacity of major training providers is about 20,000 places per year, it will take 2 years to provide the training for 40,000 workers.

13. Our assessment is that the proposed legislation will have very little financial implication on duty-holders affected by the proposal. In any case, the benefits derived through safety training will help reduce accidents and far outweigh the costs of providing training.

## **PUBLIC CONSULTATION**

14. A special meeting with representatives of relevant training organizations, employers' associations and employees' unions was held on 29.2.2000. They generally supported the proposed legislation. The Labour Advisory Board was consulted on 16.8.2000 and endorsed the proposal.

## **LEGISLATIVE TIME-TABLE**

15. We aim to introduce the proposed Regulation into the Legislative Council later this year. For the relatively large number of persons who may require the training, we intend to bring the proposed Regulation into operation 24 months after it has been enacted, but the provisions on approval of training schemes will take immediate effect, to enable training to start as early as possible so that the persons affected will have been trained by the time the regulation fully comes into effect.