



Work Safety Alert

Drowning while Conducting Underwater Welding Work

1. **Date of Accident :** November 2020
2. **Place of Accident :** At a bay of a container terminal
3. **Summary :**

A diver was drowned while carrying out underwater welding work to the deck piles of a container terminal with the use of surface-supplied air diving equipment.

4. Work Safety Alert for Contractors/ Employers :

To ensure the occupational safety of divers engaged in underwater welding work, the contractors/ employers responsible for the work should provide and maintain a safe system of operation which should include, but not limited to, the following:

- appointing a competent person to conduct task-specific risk assessments to identify all potential hazards associated with the work, taking into account the work nature, the work site and surface conditions, the required diving mode, the plant/ equipment to be used and the time to be spent underwater, particularly the hazards of drowning and electrocution;
- formulating safe work methods and procedures, with Diving Rules issued for the work, with due regard to the results of risk assessments, the requirements of safety legislation, relevant codes of practice and safety guidelines to minimise the risks exposed to the divers concerned;
- employing a suitable diving supervisor in writing to be in immediate control of the diving operation and ensuring that he/ she should not dive while acting as a diving supervisor;



- employing sufficient divers and supporting personnel to form the diving team(s) as necessary for undertaking the diving operation, and ensuring that all team members are medically fit to dive;
- ensuring that the training and experience of all diving team members are commensurate with the required diving mode and the assigned task;
- ensuring that the necessary plant and equipment are properly maintained and the corresponding registers are kept up-to-date with maintenance records and test and examination certificates;
- when breathing air is supplied to the diver from an air compressor, among others, ensuring that
 - suitable equipment is used to supply adequate breathing air and the purity of the air is in compliance with the specifications;
 - the equipment is maintained according to manufacturer's instructions;
 - the air intake of the compressor is properly located to avoid sucking in contaminated air such as engine exhaust;
 - the compressor being used is designed for the diving operation with adequate filter efficiency and the hose is free of oil and contamination;
- ensuring that all diving team members have the appropriate first aid training and experience and providing first aid equipment on the work site;
- ensuring that emergency and first aid services are available and that all diving team members are informed of the emergency arrangement;
- ensuring that effective communication is in place among the diving team(s) at the diving location(s), the persons having control of the work site, and the emergency services;
- providing necessary information, instructions and training to diving team members all aspects related to the work including Diving Rules, use of



plant and equipment, safe practices and emergency procedures; and

- establishing and implementing an effective monitoring and control system to ensure all safety measures are strictly followed.

5. Reference :

- [Safe Systems of Work](#)¹
- [Five Steps to Risk Assessment](#)¹
- [Five Steps to Information, Instruction and Training](#)¹
- [Code of Practice : Safety and Health at Work for Industrial Diving](#)¹

DISCLAIMER

This Work Safety Alert (“the Alert”) is issued at the earliest possible opportunity after a serious accident with a view to drawing the attention of interested parties to the general safety precautionary measures necessary to protect people engaging in similar work activities. The material contained in the Alert constitutes general guidance only. It does not reduce, limit, or replace, any legal obligations upon any person to comply with any statutory duties under relevant legislation. Users such as Managers and Supervisors should make their own evaluation of the information contained in the Alert to determine if it can be applied to their own situations and practices. The Labour Department does NOT accept any responsibilities for any loss or damage resulting from the use of or failure to use of the information on the Alert.

Note: The material contained in the Alert is not exhaustive, and will be supplemented/ adjusted where necessary if more relevant information comes to light.

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