



Systemic Safety Alert **Electrical Works**

Major systemic safety problems

Safe isolation of electricity is of paramount importance, and can be achieved through implementing a safe system of work, i.e. a lock-out and tag-out system. The following high-risk situations require your special attention: -

- modification/repair works on electrical installation already put in service: making the uncompleted installation live would result in serious burns, electrocution, or even fire and explosion;
- restrictive or conductive workplaces: a worker working in a restrictive workplace (e.g. the void above the false ceiling) would find it difficult to set himself free if his body makes contact with live part accidentally, whereas a conductive workplace (e.g. inside an earthed steel tank) would provide a good return path for earth leakage/fault current;
- working at height: electrical work on step ladders should be avoided as even a mild electrical shock would likely cause loss of balance of the worker resulting in fall from height.

Accident prevention measures

RSOs should advise their employers/clients to: -

- conduct task specific risk assessments of electrical works and formulate a safe system of work having due regard to the high-risk situations/tasks mentioned above;
- take effective arrangements before and during electrical work to ensure that the electricity source involved is safely isolated, for instance, by implementing the lock-out and tag-out system with suitable warning notices displayed;
- ensure that electrical work is only carried out by Registered Electrical Worker



("REW") and a non-REW is not allowed to carry out electrical work without effective supervision of an REW;

- clearly communicate with all workers and supervisors involved about the hazards, the system of work and the control measures in place to ensure that they all understand their roles and responsibilities;
- adopt effective engineering control measures through the use of suitable and adequate fuses/circuit breakers, residual current device for earth leakage protection and double-insulated or properly earthed portable electrical apparatus;
- provide tailored-made safety training to workers and supervisors involved having due regard to the specific nature, location, job methods and plant/equipment to be used in carrying out the electrical works in question;
- conduct proactive inspection and take prompt rectification to ensure that the electrical apparatus and the associated plugs, sockets and wiring are in conformity with relevant safety standards and free from damage and faults;
- provide and ensure the use of suitable personal protective equipment, such as insulating gloves and mat, to afford additional protection to the workers concerned ; and
- exercise adequate monitoring and effective supervision to ensure that the above safety precautionary measures are strictly followed.

RSAs should take into account these systemic safety problems and accident prevention measures in executing safety audit functions.

DISCLAIMER

This Systemic Safety Alert (the Alert) is issued to drawing the attention of interested parties to the relevant systemic safety problems and accident prevention 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.