

## Accident Advisory: Worker electrocuted during dismantling works

Ref: [2021059](#) WSH Alert Accident Notification dated 19 October 2020

On 15 October 2020, a worker was dismantling an electrical distribution board within a vacated building when he was electrocuted. He was sent to the hospital where he was pronounced dead.



Figure 1: The electrical distribution board that the worker was dismantling.

### Recommendations

Stakeholders in control of similar workplaces and work activities, such as occupiers, employers and contractors, are advised to consider the following risk control measures to prevent similar accidents:

#### **Competent worker**

- Deploy only authorised and competent personnel such as licensed electrical worker (LEW) to perform all electrical work including dismantling works. There are 3 classes of electrical worker licence, namely: Electrician's Licence, Electrical Technician's Licence and Electrical Engineer's Licence. Find out more about the various licences at the Energy Market Authority's website.
- Provide specialised electrical safety training to workers who need to work with, or around live or exposed electrical components. Provide periodic re-training or refresher training as necessary.

#### **Isolation of hazardous energy**

- Isolate and lock out the electrical power source and de-energise the equipment prior to working with it. Proper lock-out and tag-out (LOTO) procedures must

be established and supervisors are to check that LOTO has been correctly applied on-site before allowing the work to proceed.

### **Personal protective equipment**

- Equip workers performing electrical work with the necessary personal protective equipment (PPE) such as electrical work gloves and rubber-soled footwear.
- Supervisors are to ensure that the PPE provided are worn correctly and at all times when performing electrical works.

### **Safe work practices for workers**

- Always conduct visual checks on electrical equipment and its wiring before starting work. Do not attempt electrical work if the equipment is energised and an electrical component or wire has been found to be damaged or defective in any way.
- Avoid carrying out electrical works under wet conditions.
- Use only tools with non-conducting handles when carrying out electrical work.
- Work on top of a dry rubber insulating mat where practicable.
- Use a non-contact voltage detector to detect presence of residual voltage in the equipment.

## **Risk Assessment**

Employers and contractors are reminded to conduct a thorough Risk Assessment (RA) before carrying out electrical works to manage any foreseeable risk(s). The RA should cover, but not limited to, the following areas:

- Presence of live or exposed electrical components and wires.
- Safe work procedures for electrical work including the LOTO procedure.
- The need to implement a Permit-to-work system for electrical work.
- Types of tools and/or equipment available for electrical work.
- Possibility of wires or cables becoming live during electrical work.

## **Further Information**

1. Workplace Safety and Health Act
2. Workplace Safety and Health (Risk Management) Regulations
3. Workplace Safety and Health (General Provisions) Regulations
4. Workplace Safety and Health (Construction) Regulations
5. Code of Practice on Workplace Safety and Health Risk Management
6. Electricity Act
7. Electricity (Electrical Workers) Regulations
8. SS 638: 2018 Code of Practice for Electrical Installations
9. SS 571: 2011 Code of Practice for Energy Lockout and Tagout
10. Energy Market Authority's website: <http://www.ema.gov.sg/>
11. Energy Market Authority's "Electrical Safety at Construction Sites"
12. Energy Market Authority's Electrical Accident Case Studies & Lessons Learnt

### 13. WSH Council's Activity-Based Checklist on Safe Electrical Maintenance Work

### 14. WSH Council's 6 Basic WSH Rules for Use of Electrical Equipment

Information on the accident is based on preliminary investigations by the Ministry of Manpower as at 26 Oct 2020. This may be subject to change as investigations are still on-going. Please note that the recommendations provided here are not exhaustive and they are meant to enhance workplace safety and health so that a recurrence may be prevented. The information and recommendations provided are not to be construed as implying any liability on any party nor should it be taken to encapsulate all the responsibilities and obligations under the law.

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