

## IMDM OUTER

**Title:** S&T Member of staff working in a location case

**Injury:** Significant electrical shock

### Incident

On the 25<sup>th</sup> of May at 18:17hrs a member of S&T staff received a significant electrical shock whilst carrying out hand tracing of wiring in location case 97 close to Witley station on the WPH1. The work involved measuring the electrical current in the location case; it was known to be 'live'.

The effects of the electrical current threw the IP back in the direction of the conductor and running rails; a safety barrier prevented the IP from falling into the open lines.

The location case is of metal construction and houses equipment associated with a specific type of circuit; AC 50 HZ double rail track circuits. Located inside this particular type of equipment is a 'Surge Arrestor' component (as identified within the red circle on the photograph), this component was 'live' and exposed; the electrical supply was measured at 575v AC.

During the work activity, the IP inadvertently held the metal location case with one hand and touched the exposed terminal of the surge arrestor with the other, thereby completing an electrical circuit resulting in the electrical shock.

The IP went to Hospital where during examination it was identified he had an irregular heart rhythm for which he is receiving treatment.



This incident is the subject of further investigation; please consider the following discussion points;

- When working with 'live' equipment it is important to have 'situational awareness'; what are you inadvertently touching?
- Where live terminals exist, consider covering with insulating shrouds similar to the 'OBA' ones shown at A above.
- Use of hand protection; Type 0 (up to 1000v) Insulated gauntlets are available for use. We are trialling Type 00 (up to 500v) to see if this PPE is suitable for activities requiring dexterity.
- Consider what would be your teams' First Aid capability in a similar situation.