

ACCIDENTS/INCIDENTS/ IN THE ELECTRICITY DISTRIBUTION INDUSTRY AND PREVENTIVE MEASURES AND MAINTENANCE/RISK MANAGEMENT.

22 March 2002.

Following is a reported incident/accident and measures taken to prevent such an accident recurring.

7. ACCIDENT/INCIDENT: Graaff-Reinet Municipality. Accident occurred during May 1997.

Description Of Events.

The Municipality had a pole mounted 11 000/400 Volt transformer on a typical H - structure supplying 3 phase electricity to a nearby sewerage pump station. This structure was installed in about 1976 to 1978.

An old LV 4 - core lead sleeve cable and a newly installed SWA PVC 4 - core LV cable were installed on a pole next to each other, fastened with stainless steel bandit strapping around the pole. An angle iron was placed over the SWA PVC cable to protect it against vandalism.

The MV supply was via 3 bare overhead aluminium conductors connected down to a set of cut-out fuses and from the fuses to the transformer bushings. The transformer was mounted on two horizontal I - beams between the H - poles.

A young schoolboy climbed up the H - poles on to the transformer platform to have a better view of goats he was in charge of. He apparently lost his balance and slipped - his normal reaction to avoid falling was to grab something. Unfortunately he grabbed hold of the MV aluminium conductor connected to the MV bushing of the transformer and was severely injured, resulting in the loss of both arms.

The position of the transformer was about 600 metres from the nearest developed township next to a cemetery and on open ground adjoining a vlei area. There is a footpath to the installation being used by the residents. The height from ground level to the MV bushings connector of the transformer is approximate 150 mm below the required height for a transformer outside a township.

However, during the trial the plaintiff's advocate reasoned as follows:

- that the installation is within a township and therefore the height above ground level should have been in accordance with Act 85 of 1993;
- that the bandit strapping made it easier for somebody to climb the pole; and
- that there were no barbed wire or danger signs installed.

The ruling of the Judge was that the Municipality was negligent.

STEPS TAKEN TO PREVENT SUCH AN ACCIDENT RECURRING.

Subsequently the Municipality has had barbed wire installed and danger signs on all poles carrying electrical machinery and equipment. This is an ongoing process, which must be inspected on a regular basis as vandals frequently remove the danger signs as well as the barbed wire.

The following crucial factors came to light from this incident and which further contribute to preventing the recurrence of such an accident:

1. All electricity distributors must ensure that barbed wire or some deterrent and danger signs on poles carrying electrical machinery & equipment be installed.
2. The OHS Act, Act 85 of 1993 is not very clear on some technical issues.
3. Detailed records must be kept of routine inspections performed to check whether barbed wire and danger signs are still intact.
4. Employees should ensure that they fully understand the OHS Act 85 of 1993.

The Municipal Manager is of the opinion that all electrical incidents should also be reported to the AMEU in future and should be discussed at all AMEU Branch meetings and to receive inputs from members and make recommendations on how to improve on safety, etc.
