



# Yes! But are they Safe to Use?

By Russell Ashley, Senior Electrical Technical Officer

We use an incredibly diverse range of equipment in the course of our daily lives, and often the inbuilt design safety features are taken for granted. For example when we drive into any service station in Australia, we are entering a potentially hazardous environment. The mixture of petrol fumes, air and ignition sources are all there in the one place, and together they can create a very dangerous situation. We all look at the signs on the petrol bowsers informing us about the danger of naked flames and the impact of mobile phones, but do we ever think about the bowsers themselves? These are highly complex equipment containing electric pumps, electrical contacts, meters and lights. Are we sure that they are safe to use? In their open-air setting, could water, dust or some object have penetrated these sophisticated pieces of electrical equipment and rendered them dangerous?

Whether it be petrol bowsers, signs along freeways or in tunnels, electrical switchboards, or essential safety communication equipment such as radio antennae or emergency beacons, all are likely to have been tested by TestSafe Australia to determine compliance for ingress protection with AS 1939 or IEC 60529.

The degree of protection required by the standard is the extent of protection provided by an enclosure against access to hazardous parts, and ingress of solid foreign objects and /or ingress of water. It is verified by standardised test methodology and an IP coding system is used to indicate the degree of protection provided by such an enclosure.



*Senior Electrical Technical Officer Les Golder conducting an IP test on a fuel dispenser*

## What Tests are carried out?

Depending on the IP code the equipment maybe tested with access probes, in a dust chamber and for ingress of water with different flow rates and means of application.

## What does this mean?

Electrical equipment can have a degree of protection provided by an enclosure that will: Protect persons against access to hazardous parts inside the enclosure; Protect the equipment inside the enclosure against ingress of solid foreign objects; Protect the equipment inside the enclosure against harmful effects due to the ingress of water or dust.

If you would like any further information on I.P. Tests call (02) 4724 4900.