

Risks from Electric Hand Tools**What happened?**

While carrying out a routine inspection, NOPSA inspectors recently discovered someone using an electric hand tool rated at 240V in an environment where the power supply leads could easily be damaged by activities such as cutting, grinding and welding of steel sections. The circumstances were such that a prohibition notice was issued to prevent the risk of one or more electrocutions.

What could go wrong?

Every year, people are killed by electrocution. The National Occupational Health and Safety Commission gives a figure of 122 workers killed between 1989 and 1992 in Australia. Of these, many were killed by 240 volt systems. 28% of the fatalities were associated with use of industrial equipment or work tools. Significantly, 7% of the total number of deaths occurred on systems protected by a residual current circuit breaker.

NOPSA has received 29 notifications of electric shock incidents in the last three years, and, although none of these offshore incidents have resulted in deaths, in some cases this may simply have been a matter of luck.

Key Lessons:

Schedule 3 of the Offshore Petroleum Act 2006 places duties on various parties to take all reasonably practicable steps to ensure that all work activities carried out on a facility are safe, and without risk to the health of any person at or near that facility.

Good practice demands that a hierarchical approach to eliminating risks is taken. This means that the following steps must be followed in order:

- Elimination of the risk;
- Substitution for a less hazardous alternative;
- Redesign;
- Separate the worker from the risk;
- The use of administrative procedures such as permit to work systems;
- The use of PPE.

240 volt hand tools can often be replaced by air tools, eliminating the risk from electrocution, making them a viable alternative whenever the use of powered hand tools is required.

If the use of air tools is not possible, then substitution should be considered. Options under this category include the use of battery powered hand tools, or tools powered by an isolated, 110 volt centre-tapped earth transformer.

Risks from Electric Hand Tools

These methods of elimination or substitution are generally achievable, and it is therefore reasonable for them to be adopted in preference to the use of 240 volt tools.

Facility operators, employers, and persons in charge of work activities on facilities should review their practices for the use of powered hand tools in light of the above information.

Contact

For further information email alerts@nopsa.gov.au and quote Alert 20.