

Safety & Health Circular No. 54 / 2015

Enhanced Safety Measures for Operation of Electric Arc Welding Works

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In a fatal accident happened on a Housing Authority (HA) site in July 2015, a labourer was suspected to have been electrocuted while clearing up an electric arc welding equipment after completion of a welding process for a pile cap by a welder. To prevent recurrence of similar accidents on HA sites, contractors are strongly advised to take the following enhanced safety measures when clearing up electric arc welding equipment:-

(a) Use of Welding Equipment Where Appropriate

For non-structural welding such as welding of tie-bar for formwork stiffening, electric arc welding equipment with automatic voltage reduction function shall be used. To minimize the risk of damaging the protective sheaths of welding cables in the course of dragging them to the location of welding work, welding equipment shall be located as close as practicable to the location of welding work.

(b) Imposing Permit-to-work System

When welding work has to be carried out by electric arc welding equipment, a permit-to-work system shall be implemented for inspection of the electrical installation, condition of the welding devices together with cables and adequacy of all relevant safety measures prior to the commencement of works. A permit-to-work shall be issued only if all safety control measures are properly implemented, for example, the welding equipment is earthed, welding work to be carried out on firm ground in dry condition, and proper welding gloves to be used. In addition, electrode holders together with welding leads and returns and electricity installations shall comply with relevant regulations and Code of Practice.

(c) Disconnecting Electricity Supply to Welding Equipment Before Clearing Up

Electricity supply to the welding equipment shall be switched off before clearing up the

welding equipment.

(d) Provision of Individual Residual Current Device (RCD)

Individual RCD shall be provided to each 220V socket outlet of a switch box as a contingency measure and monthly inspection shall be conducted.

(e) Management of Arc Welding Equipment

All arc welding equipment shall be kept and stored at designated storage area after work every day, otherwise such equipment should be protected from rain and flood.

The content of this circular should not be regarded as exhaustive in respect of matters covered by relevant safety legislation. Contractors should formulate relevant safe working procedures and management systems according to the actual environment and operations on their own construction sites.