

SMART OUTCOMES

Success Stories from the WTIA SMART TechNet Project

SUCCESS STORY NUMBER 1: WELDING EQUIPMENT AND SAFETY – WTIA working with a Victorian OzWeld Technology Support Centre has helped to develop and promote life-saving technology for Australian welding conditions.

The background

Electrocution of welding operators is a major Occupational Health and Safety issue in Australian industry, particularly in mining and those industries operating in dangerous and confined spaces.

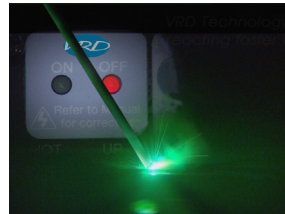
CIGWELD Thermadyne, an OzWeld Technology Support Centre with its head office in Victoria, entered the Australian welding machine market in early 2001 with a Transarc inverter power source that featured a built-in "SafeMode".

This machine was safer than a standard inverter but was not designed to meet the Voltage Reduction Device (VRD) regulatory requirements of AS 3195.

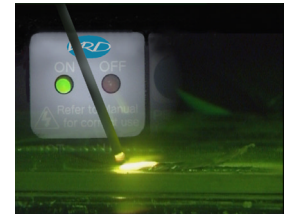
A VRD is a *Hazard Reducing Device* for welding equipment, which greatly reduces the risk of electric shock from the secondary welding circuit. Use of a VRD significantly improves safety in the welding workplace.

WTIA Technologists:

- worked with CIGWELD to develop a technical VRD specification to integrate into a new range of welding machines;
- performed exhaustive testing on the new machines and made recommendations for improvement;
- assisted with the promotion of the new technology in association with WTIA Expert Technology Tool - TN22 Welding Electrical Safety through technology demonstrations and forums and industry publications such as the Australasian Welding Journal published by WTIA.



Arc Welding,
VRD is OFF

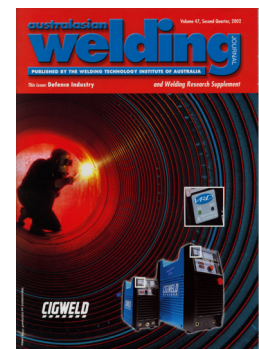
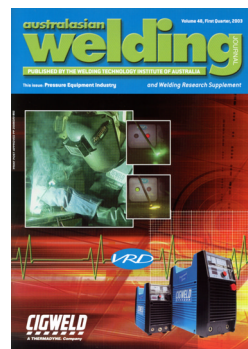


Arc Broken,
VRD turns ON

Nearly 750 machines have been sold into Australian industry with a value of \$3million.

The benefits to industry

- In Australia, it is estimated that the total number of work-related fatalities is at least 2,900 per year. This contrasts with around 1,700 road accident fatalities per year. In Australia, the economic cost of deaths and injuries at work is estimated at \$20 billion each year.
- The saving of even one life is significant.
- Operators also reported that VRD arc strike and re-strike characteristics are comparable with standard inverter non-VRD power sources. Thus workplace productivity was maintained within a safer working environment.



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