CASE STUDY

ACUSTER S.A.'s BUTT FUSION AND ELECTROFUSION WELDING MACHINES

Background

Acuster S.A. (Spain) produces a range of butt and electrofusion welding machines:

- 'Twin' - combined butt and electrofusion machine (fully controlled)
- 'Dynamic' - butt fusion machine (fully controlled, diameter up to & including 180mm)
- 'Logic' - electrofusion machine (fully controlled, diameter up to & including 315mm)

Scope of assessment

To assess the performance of Acuster's welding machines against the requirements of WIS 4-32-16 (Water Industry Specification for butt fusion jointing machines) and ISO 12176: Part 1 (butt fusion) and Part 2 (electrofusion).

To assess the performance of the joints produced by these machines against the relevant requirements of WIS 4-32-14.

Programme

1. A factory audit was undertaken of production facilities, and quality control.
2. A technical audit of type testing was carried out. Selected tests were witnessed to demonstrate compliance with specifications to assess: Operating requirements; Rigidity of the chassis; Performance of the clamps, the trimming device, the heater plate and the process controller; Ability to control the welding process in accordance with the requirements of WIS 4-32-08; and Dimensions and tolerances to manufacturer's specification.

Results

The tests demonstrated that the 'Twin' (butt end electrofusion) machine and 'Dynamic' (butt fusion) machine meets the requirements of WIS 4-32-16 with the exception that the heater plate is removed manually. Both machines produce acceptable joints in accordance with WIS 4-32-17: Appendix D.

The 'Logic' Automatic Electrofusion Welding Machine produces acceptable joints in accordance with WIS 4-32-14: Appendix D and meets the requirements of ISO 12176: Part 2.

Three certificates (PT/127/0201, PT/128/0201 and PT/129/0201) were awarded in February 2001 to cover the three machines. These products meet the requirements set out in assessment schedule PT/127/0201-AS.

Contact: WRc plc, Frankland Rd, Blagrove, Swindon SN5 8YF
Tel: 01793 865000 Fax: 01793 865001 E-Mail: wrcapproved@wrcplc.co.uk