

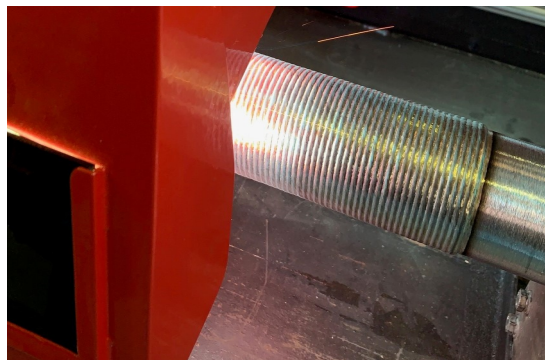
Vclad® CMT Weld Overlay

Corrosion Protection for Boiler Tubes

Since 2009 DTEC Engineering have been manufacturing the proprietary Vclad® weld overlaid boiler tube, supplying to the energy from waste, biomass, and fossil fuelled power industry within the UK and Europe.

In 2020, with the aid of advancements in welding technology, the second generation of weld overlaid tube Vclad® CMT was launched.

Vclad® CMT is a system technology delivering an automated and controlled application of Cold Metal Transfer (CMT) weld overlay to standard base tube

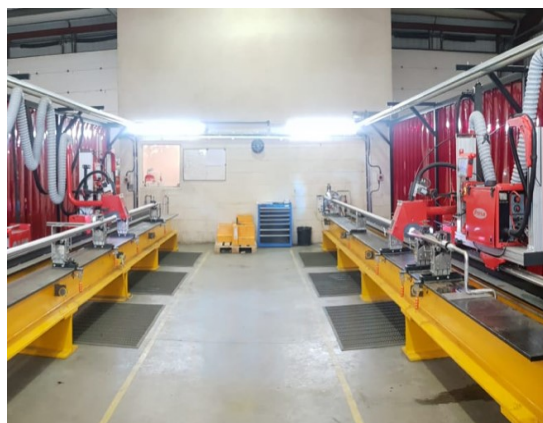


Advanced welding system architecture, ensure repeatable quality, and a high integrity weld overlay, with ultra low weld chemistry dilution.



Alloy 625 (ErNiCrMo-3) has successfully been used to significantly extend the life of boiler tubes in highly corrosive environments such as energy-from-waste boilers for many years, and continues to be the material of choice to combat most fireside corrosion issues.

Advances in the search for superior performance alloys to challenge the most aggressive superheater corrosion, have resulted in **Vclad® 686** being selected by several of the latest generation of Energy from Waste plants.



The weld overlay application encompasses the full range of typical boiler tube sizes 38 mm – 76.1 mm, but with the enhanced capability for large diameters up to 220 mm diameter for header and collector bodies, and < 38 mm for specialised superheater applications.



Applications include:

- water wall inserts & fabricated tube panels
- replacement superheaters and individual bends
- screen wall tubes
- burner, sootblower, & door aperture tubes
- headers and collectors

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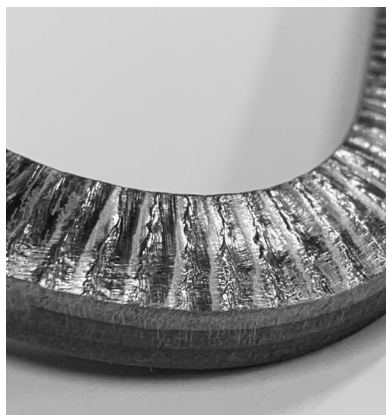
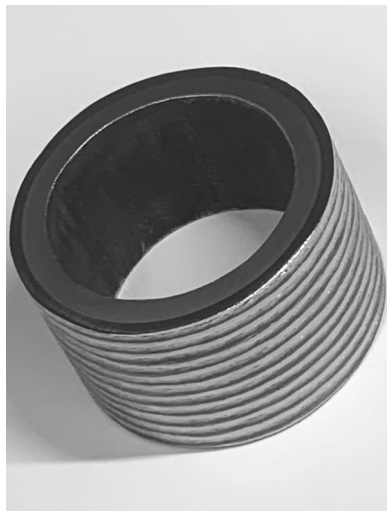


Vclad® CMT weld overlaid tube combines the economics and strength of a carbon or low alloy steel base tube material, with a NiCrMo weld overlay layer in a range of materials.

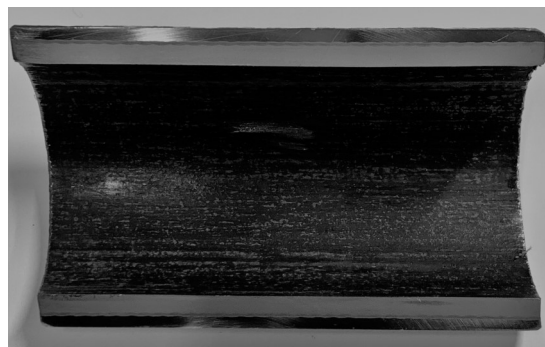
Vclad® CMT weld overlaid tube is a high integrity pressure part component, with controlled weld chemistry and ductility, and is suitable for cold and hot finish bending.

Material combinations of base tube and weld overlay alloy can be tailored to suit specific corrosion and erosion conditions, and pressure part design requirements.

High temperature fireside corrosion in boilers is a complex process, many factors contribute to tube degradation, and alloy selection is critical to providing the optimum solution that balances reliability and economics.



Ductility: Side bend test for weld procedure qualification



Consistent and uniform, the Vclad® CMT process delivers an ultra-low dilution weld overlay of assured repeatable quality.

The standard process applies a single layer of a minimum thickness 2.0 mm. Increased thickness can be achieved in either single or double layer to meet customer bespoke specifications