



Tower Bridge, London

Tower Bridge is one of London's most famous landmarks and probably the most photographed bridge in the world. Having stood for over a century, some of its cast-iron components are showing signs of decay. Cast Iron Welding Services were asked by London City Council to restore the balustrades and lamp stands that illuminate the bridge's northern approach.



Structural problems were evident externally but stripping the balustrades and lamp stands down revealed more serious damage



Each component was removed with utmost care, broken pieces were collected together ready for reconstruction at the factory.



Temporary lamp bases were manufactured and installed whilst the originals were restored.

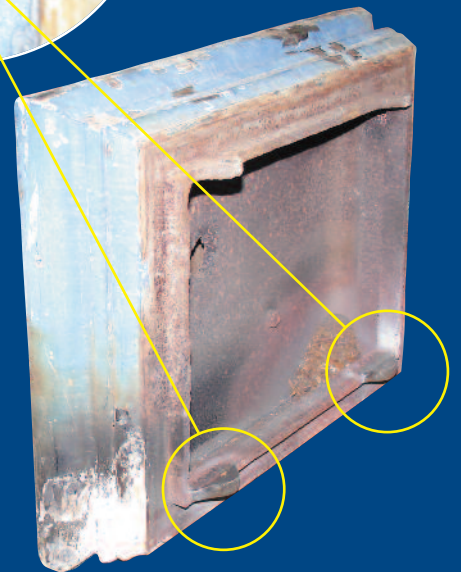
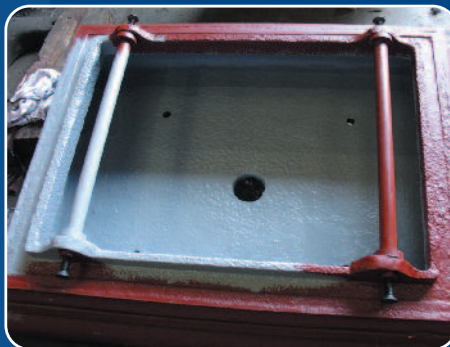




Back at the factory, the components were reassembled and carefully measured before being stripped of over twenty layers of paint!



Broken lugs were found, re-welded and drilled to accept the original tie-rods.



Stripping back a century of paint revealed the crisp detail of the original mouldings, some of which had to be re-attached due to cracking and corrosion.



Gas fusion welding requires the composition of the iron in the damaged component to be analysed, enabling bespoke filler rods to be cast to achieve the repair. A custom-built furnace is constructed around the component within which the welding takes place. Heat is applied gradually to allow the furnace to reach a temperature of 580°C at which point the metal around the repair is melted and the filler rods fill the damaged area. The component is cooled gradually and the repair evaluated.



The damaged areas are ground out ready for gas fusion welding. The repair is then cleaned up ready for final machining and painting.



The repaired components are bolted together and if necessary machined true. Finally each component is primed, rebuilt and measured for fit.



The restored lamp stand was carefully lifted back into place.



The balustrades are slotted into position followed by the capping rail.



The restored balustrade and lamp stand ready for final painting.

Samson Road, Hermitage Industrial Estate,
Coalville, Leicestershire, England LE67 3FP

Tel: +44 (0)1530 811308 Fax: +44 (0)1530 835724

Email: sales@castironwelding.co.uk

Web: www.castironwelding.co.uk

cast
iron welding services ltd.