### Slinden Services Ltd

Cast Iron Welding & Metal Stitching Repairs

#### NER Water Crane & Handle

We are delighted to have been involved in the major restoration project on behalf of a Cumbrian Railway Company to fully restore to working order a vintage NER Water Crane complete with the water valve operators handle.

When the water crane arrived in our Derbyshire workshop, all the components were disassembled, shot blasted and crack tested, ready to begin the process of rebuilding.

A rare feature of this water crane was the fire basket, which would prevent water from freezing in extreme cold temperatures, and also stop the cast iron from cracking...many of the original fire bars were missing, so a pattern was made from a good part of the casting and sent away to our trusted foundry to have the basket recast. Once cast, it was welded in and ground to shape before shot blasting and painting with red oxide primer and undercoat.

The original baseplate would have been extended and the handle controlling water flow on the same base...as they now had separate bases, it was decided to redesign and make a pattern to what would have been the original shape, and again, the foundry cast up this part, which was welded to the column's base seamlessly!

# Breathing new life into damaged Cast iron components

L3 Olympic House, Westminster Industrial Estate, Measham, Derbyshire, DE12 7DS

Telephone: + 44 (0) 1530 274646 Fax: + 44 (0) 1530 274647 Email: info@slinden.co.uk

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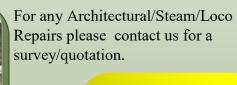
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Modifications were then made to the base of the handle to fit the new base, and underground valves and pipes for the water flow to water crane were introduced below the main base plate, followed by pressure testing of all these parts.

A main component which was missing was the elegant "swan neck" – the section which sits on top of the column and extends horizontally to carry water from the column to the loco tank. Again, a pattern was made and the swan neck cast, before machining and aging. We also redesigned and manufactured the finial and bracing which allows the counterbalance and swan neck to swing in any direction effortlessly.

The water crane will now feed water from the newly restored water tower to the steam locos just off the end of the platform at Kirkby Stephen East Station for their many visitors to enjoy watching an authentic part of steam railway history in action!



- On Site Inspection
- Lloyds Welding Procedure
- Re-Casting Service
- Full Shot Blasting
- Painting As Required
- 2 Year Guarantee \*\*

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