

COWANS

COWANS SHELDON

Upgrading and re-engineering of Cowans Sheldon 75 tonne Railway Breakdown Cranes

- Refurbishments
- Enhancements
- Spare Parts



The cranes, originally supplied in the 1970's, were becoming increasingly unreliable and requiring more maintenance. The obsolescence of much of the equipment was also prohibiting spares support. A total overhaul and refurbishment has extended the service life of these cranes by another 20 years and incorporated safety modifications to bring

the cranes up to mandatory requirements. On arrival at our factory, the cranes were stripped down to their individual components parts and bare metals. Non destructive testing was carried out to confirm structural integrity. The hydraulic rams and ancillary hydraulic equipment were refurbished, as were all drives and gearboxes.

factsheet

Cranes and rail borne plant and equipment are an expensive asset to a rail network usually designed for a life cycle of 15 to 20 years. At the end of its design life it does not have to be scrapped, on the contrary, though design review and enhancement/refurbishment programme, new technology can provide a lease of life and with careful consideration, extend its life a further 10-15 years. Cowans Sheldon have that experience.



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A number of reliability and environmental as well as statutory improvements were made.

- A new diesel engine, coupled with an enhanced hydraulic pump arrangement, was fitted, improving performance, reliability and spares support and reducing maintenance requirements.
- A history of fatigue failures in the slew ring bolts resulted in repeated replacement at high cost. An improved design was manufactured and fitted.
- A new automatic safe load indicator (ASLI), complying with BS 7262:1990, was fitted, thereby removing unsafe working practices.
- Six brake disks were added to the existing wheelset configuration, coupled with improved brake materials and calliper/actuators. This modification improved brake performance and reduced thermal input and degradation to disks and pads.
- Better floodlighting and general work area fluorescent lights were introduced to improve the working environment and hence safety.
- A new operator's cab with improved entry and exit, mounted on anti-vibration mountings was fitted and a rear facing video monitor to improve the operator's all round vision. To improve communication with the ground crew a radio and public address system were installed.



30 year old breakdown crane...



...given a new lease of life.

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