

Engineering a Reliable Future for a Legacy Crane

Project Overview

As part of a wider site refurbishment programme at one of the UK's leading steel manufacturers, Street Cranexpress was appointed to carry out an electrical upgrade on an existing overhead crane.



Our scope of work focused on replacing key elements of the crane's ageing electrical system, including the installation of a brand-new main control panel, hoist control panel, cross travel motor and associated electrical circuitry. The upgrade also incorporated Schneider Electric variable speed drives and switchgear, supplied by [bxh Electrical Wholesalers](#), to improve reliability, enhance safety and support the continued operation of the crane for years to come.

The Challenge

The customer's existing crane electrical system had served the business for many years but had become increasingly difficult to maintain.

Over time, the system had undergone numerous modifications, resulting in a lack of accurate electrical drawings and documentation. This made fault finding more complex and increased maintenance challenges, while ageing components also affected reliability.

As part of the customer's wider investment in modernising its facilities, a decision was made to replace the outdated electrical equipment with a new solution, fit for the future.

Our Solution

Following a detailed site survey, our Projects team designed and manufactured a completely new crane control system tailored to the customer's operational requirements.

The upgrade included:

- A brand-new main control panel
- New hoist control panel
- Replacement cross travel motor
- Modern control circuitry throughout
- Schneider Electric variable speed drives and switchgear
- Complete electrical documentation package, including updated drawings

The new electrical system provides smooth, variable speed control across all crane motions, helping to reduce mechanical wear while improving operational performance and reliability.

Engineering Challenges

Every crane modernisation project presents its own unique challenges, and this installation was no exception.

One of the most significant upgrades involved replacing the original cross travel motor, which dated back to the 1960s. Installing a modern equivalent required the design of new mounting arrangements together with precise on-site alignment to ensure the crane travelled accurately and smoothly.

A further challenge involved the hoist motor. The existing motor did not include an encoder or a suitable extension shaft, meaning it no longer complied with current standards.

Working alongside a local motor engineering company, the motor was removed before being modified with a new extension shaft capable of driving an encoder. Once complete, the motor was reinstalled and integrated with a Schneider Electric variable speed drive, providing accurate speed feedback and improved control.

Project Delivery

The project followed a structured delivery process to minimise disruption and ensure a successful outcome:

- Preliminary site survey
- Design and drawing approval
- Procurement of components
- Control panel manufacture
- Factory testing
- On-site installation
- Commissioning and final testing

By carrying out much of the engineering and panel build work in-house, Street Cranexpress maintained complete control over quality, scheduling and technical delivery throughout the project.

The Result

The completed upgrade has provided the customer with a significantly more reliable, safer and easier-to-maintain crane electrical system.

Key benefits include:

- Improved operational reliability
- Modern electrical control technology
- Enhanced safety and compliance
- Variable speed drives reducing mechanical wear
- Easier maintenance and future fault finding
- Comprehensive electrical documentation and drawings
- Extended service life of the crane

Rather than replacing the entire crane, the customer has been able to maximise the value of its existing equipment through a carefully engineered modernisation programme.

As Project Manager, James Salter, explains:

"This project demonstrated our ability to react promptly to our customer's needs and specifications, using our in-house capability to design, build and commission complex technical electrical systems whilst complying with relevant standards."

