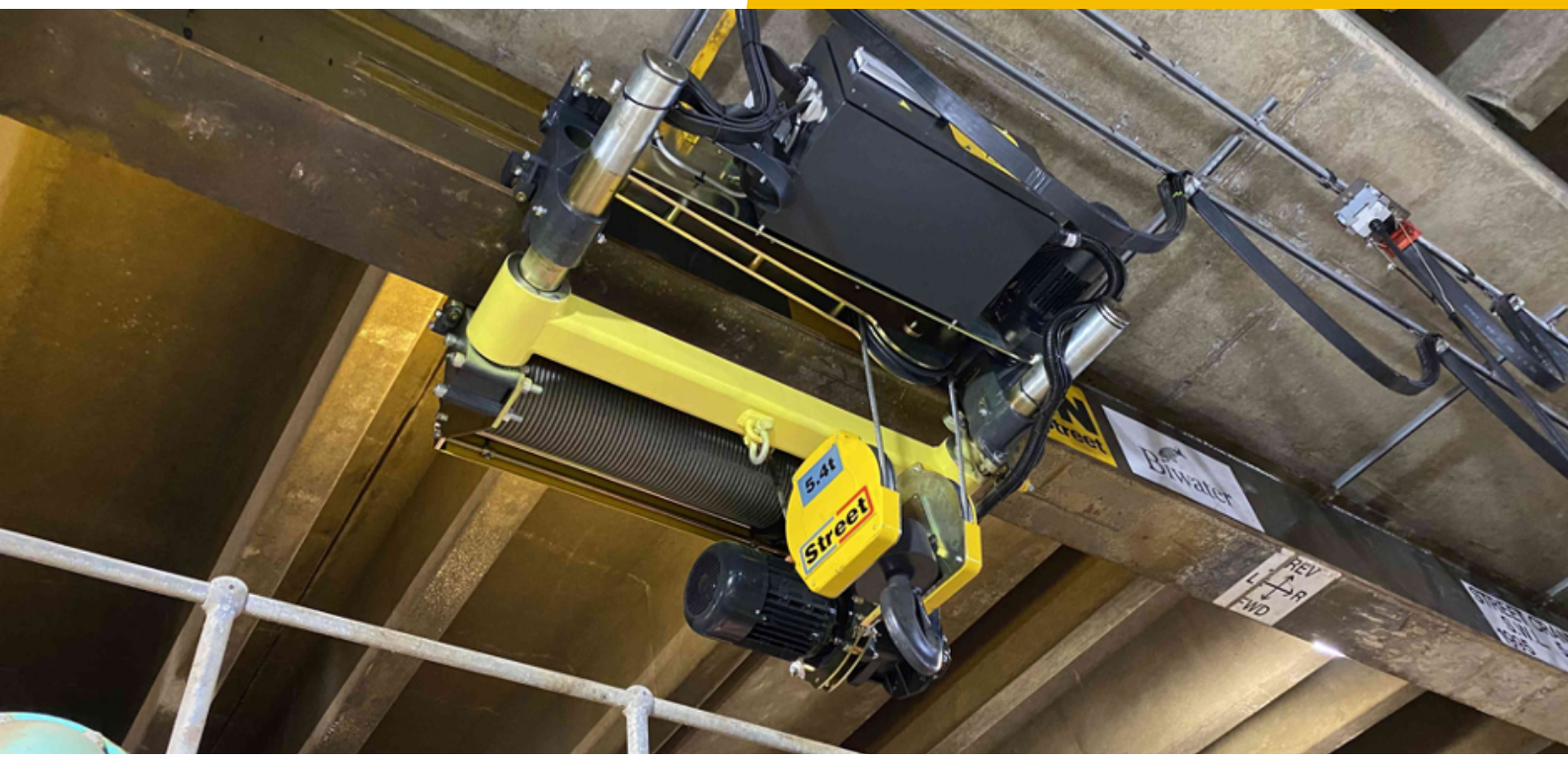
Southern Water:
Eastbourne

Street Cranexpress.



Lamella Crane Replacement Hoist Case Study

The Challenge

For a more efficient and safer lifting process, the lifting beam used to snatch pump chains at Southern Water's Eastbourne site needed a replacement unit.

The lifting beam had been bolted to the cross members of the 5t hoist, but the location where the holes had been drilled could have affected the integrity of the cross-member box section as they were in direct sheer and the modification had not been approved by the original equipment manufacturer.

The Solution

Street Cranexpress proposed a better working practise which meant replacing the existing 5t chain hoist with a new unit, and an integrated 3t bespoke lifting beam.

Street Cranexpress designed, manufactured, and installed a bespoke 3t lifting beam on the solid steel round span bars. The lifting beam was constructed using two tubular pipes connected by a crossmember.

This method kept the chain hook attached to the lifting beam central to the 5t wire rope hoist allowing a smoother, safer lift.

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Original hoist

- The existing hoist had been modified without approval from the OEM by a previous contractor.
- The securing bolts were in direct sheer and there was no evidence of a proof load test.

Street Cranexpress Engineers lowering the old hoist

- The existing 5t wire rope hoist was lowered from the crane bridge using a certified lifting tree and two chain blocks simultaneously.
- The original hoist was lowered and placed onto a high-level platform.

The new lifting beam

- The new lifting beam was fabricated using two tubular pipes, connected by a crossmember section.
- The cross member had a 3t dedicated lifting point with a 3t D Shackle attached.

The replacement hoist

- The replacement hoist had been tested at our engineering workshop prior to installation.
- Once on site, the new Street ZX8 hoist unit had to be lowered underground to its new location using existing cranes on site which are maintained by Street Cranexpress quarterly.

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Proof Load Test

- A proof load test was conducted on the 5t wire rope hoist.
- A Report of Thorough Examination was then carried out on the hoist before it was put into service.
- Its first lift was to take the old hoist from the high level to the lower level. That was then moved between bays using an existing bogey to a position it could be lifted to the surface and removed from site.

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