

CI Logistics help drive Perkins Engines forward



Due to high customer demand, Perkins Engines of Peterborough had a requirement to significantly increase the production rate of their three cylinder diesel engines currently assembled on a powered floor conveyor.

To achieve the higher output, would normally have required the lengthening of the existing assembly line, to accommodate the additional operators required.

However Perkins had a production area confined by heavily used access gangways that prevented any conventional extension of the existing line.

A parallel assembly line was the acceptable solution, but the gangway separating them still presented its own challenge of how to move product between the new and existing lines, without disrupting the essential truck traffic that used the area.

Several options including powered shuttle cars above and below ground were considered and discounted before an acceptable solution was agreed.

The final system selected following design discussions with CI Logistics, was an electrified monorail system (EMS) that allowed part assembled engines to be automatically lifted from the new assembly line and transferred at high level over to the existing assembly line. For this, 4 powered trolley sets running together on a high level closed loop power track were specified. Each trolley set has a self contained powered hoist / carrier arrangement, that lifts / lowers the 200 kg engine.



The part assembled engines, complete with their work pallet, are powered onto a waiting empty carrier at the ground floor load station on the new assembly line. The loaded carriers are then lifted up to high level by the hoist on the trolley set above. The trolley set and its load are then powered (at varying speeds to suit the track configuration) around the system to an unload station on the existing assembly line. Here the loaded carrier is lowered to the ground floor level and the engine discharged onto the existing assembly line.

Once emptied, the carrier is then fed with an empty assembly pallet to return back to the new assembly line to re-start the cycle. The whole sequence runs automatically with electrical interlocks at every stage to ensure carriers, loads, hoists and trolley sets are in their correct positions. Electrical control panels are installed at both ends of the system and provide Perkins engineers with full control of the system by means of coloured HMI devices.

Perkins engineers and CI Logistics worked closely together to design this bespoke system at the CI Logistics factory. The project benefited from the close working relationship that CI Logistics have with one of their key partners, Schierholz in Germany who manufacture EMS components.

The system was installed during June and July 2006 without disrupting Perkins production schedules. The project was completed on schedule with the final interface with the existing assembly lines and commissioning taking place over the two week summer shutdown period.

Further information regarding CI Logistics' products and services can be obtained by; telephoning on + 44 (0) 116 276 1691, emailing web@conveyors.co.uk, or by visiting the CI Logistics website - www.conveyors.co.uk.

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