



“There are not many companies who can offer an integrated automation solution.”

SCOTT AXELSON
VICE PRESIDENT,
PLANNING & DEVELOPMENT,
TRAPAC LLC

Innovation makes TraPac's moves count

Hybrid solutions customised to the application requirements.

Terminal

TraPac, a subsidiary of Mitsui O.S.K. Lines Ltd., has been operating in the busy port of Los Angeles, USA, for over two decades.

“In 2008 TraPac renegotiated a longterm lease with the Port of Los Angeles. This amounts to a multi-year endeavour given the strict regulations on, for instance, the environment that we must follow. It also meant we would have funds to develop and modernise the terminal,” says **Scott Axelson**, Vice President Planning & Development, TraPac.

Challenge

TraPac needs to stay competitive in an increasingly challenging business environment. In addition to rapidly rising costs for labour and regulatory compliance, the company is preparing for the Panama canal expansion.

“The expansion will allow shipping companies to by-pass the west coast with their largest cargo ships heading to the Atlantic and beyond. All terminals on the west coast are struggling to remain relevant,” says Axelson.

The result is a push towards automation, driven by both opportunity and necessity.

Solution

To ensure TraPac's every move counts, Kalmar realised an integrated solution using both ASCs and automated straddle carriers. Customised based on the terminal layout, the solution ensures space is used efficiently and capacity is maximised.

The terminal features an automated straddle carrier stack as well as differently placed ASC stacks: parallel (4), perpendicular (15) and miniblocks (2). The 28 automated straddle carriers also deliver containers to the ASCs.



Technology

Kalmar TLS is a flexible, equipment and TOS independent automation platform ensuring the integration of the systems at TraPac. It serves as the backbone of the application, interfacing with the 3rd party RMGs and conveyor at the intermodal yard in addition to Kalmar ASCs and Kalmar automated straddle carriers.

The automated straddle carriers are self-contained and autonomous in terms of navigational integrity. The vehicles navigate based on virtual routes with a 2cm accuracy, using external reference markers to correct slight deviations.

Added value

The combination of different automation technologies and customisation based on terminal layout, Kalmar ensured space is used effectively and capacity is optimised.

The integration of the various systems in the TLS captures operations in one automation platform. It provides a single interface to TraPac's automated equipment, 3rd party RMGs, conveyor, process automation solutions and access control, safety and fault monitoring systems.

The ability of the equipment to place and pick up containers on the pavement, decoupling the duty cycles of cranes and allowing for buffers, ensures optimum flexibility of operations and maximises the number of containers handled per hour.

Results

The project at TraPac is realised in phases, ensuring the operations at the terminal continue during the conversion. The first phase, consisting of 10 ASCs and 17 automated straddle carriers has started serving vessels in June 2014. The concept has already started proving itself while the remaining items are being addressed.

At the same time Kalmar has received an order for the 2nd phase of TraPac. An additional 17 ASCs and 11 automated straddle carriers are being delivered over 2015 and 2016. "The integration of the terminal systems is vital to us and working with a single integrator like Kalmar is critical to ensuring accurate, reliable and timely project realisation and operations. We are confident with Kalmar's experience with both automated stacking cranes and automated horizontal transport," says TraPac's Axelson.

Contact

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Kalmar is the industry forerunner in terminal automation and in energy efficient container handling, with one in four container movements around the globe being handled by a Kalmar solution. Kalmar is part of Cargotec.

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