



SPARROWS

CASE STUDY

VESSEL CRANE CONTROL SYSTEM UPGRADE

Complete upgrade of obsolete control system on Hydralift OMCVCT 3426 155 Te crane

BENEFITS

- A high availability Programmable Logic Controller (PLC) to minimise the impact of a failure
- Real time operator information to improve performance
- Readily available spares to maximise uptime
- Accurate manuals and drawings
- Onshore support structure for troubleshooting



ASSET

Construction, flexlay and diving vessel

LOCATION

Singapore

CHALLENGE

Obsolete controls systems reduce adaptability and are often not supported by Original Equipment Manufacturers (OEMs) in the event of a failure. To mitigate the risk of this and to ensure their deck crane on the vessel had sufficient capacity to programme additional steps required to de-rate it, our client appointed us to upgrade their crane's control system.

SOLUTION

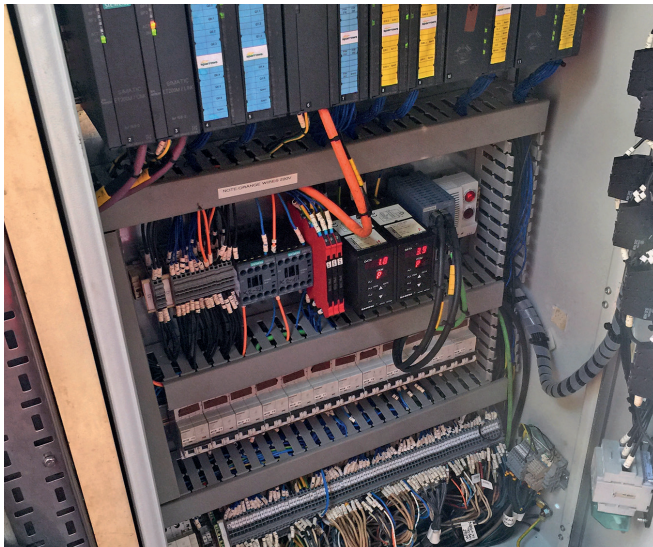
By supplying and installing a replacement control circuit, we provided our client with a solution that allows for future upgrades to be implemented easily and quickly.

- The control circuit was designed to work with a Siemens S7-400H with high availability, which was chosen as the PLC.
- A high availability PLC increases reliability as it consists of two Central Processing Units (CPUs) linked over fibre optic, so in the event of a failure on one, the other CPU takes over control.
- The design incorporated all the crane's original functionality, with the addition of de-rating to allow the pedestal life extension program to take place. As part of the upgrade, a new Safe Load Indicator (SLI) was added to allow the crane to conform to BS EN 13852.
- A Human Machine Interface (HMI) was added to the operator's cab to display all operational information in an ergonomic design to the operator when performing lifts.

SUMMARY

- In-house control panel design and build
- PLC and HMI programming
- Siemens 412H PLC Redundant CPU
- Siemens ET200M remote Input / Output (I/O) station
- Siemens TP1200 HMI
- Mipeg 2000R advanced crane load monitoring system
- Industrial high speed communication network.

1.



2.



1.
Remote I/O cabinet.

2.
HMI screen in cab.

DELIVERY ASSURED

For more information please visit www.altradsparrows.com