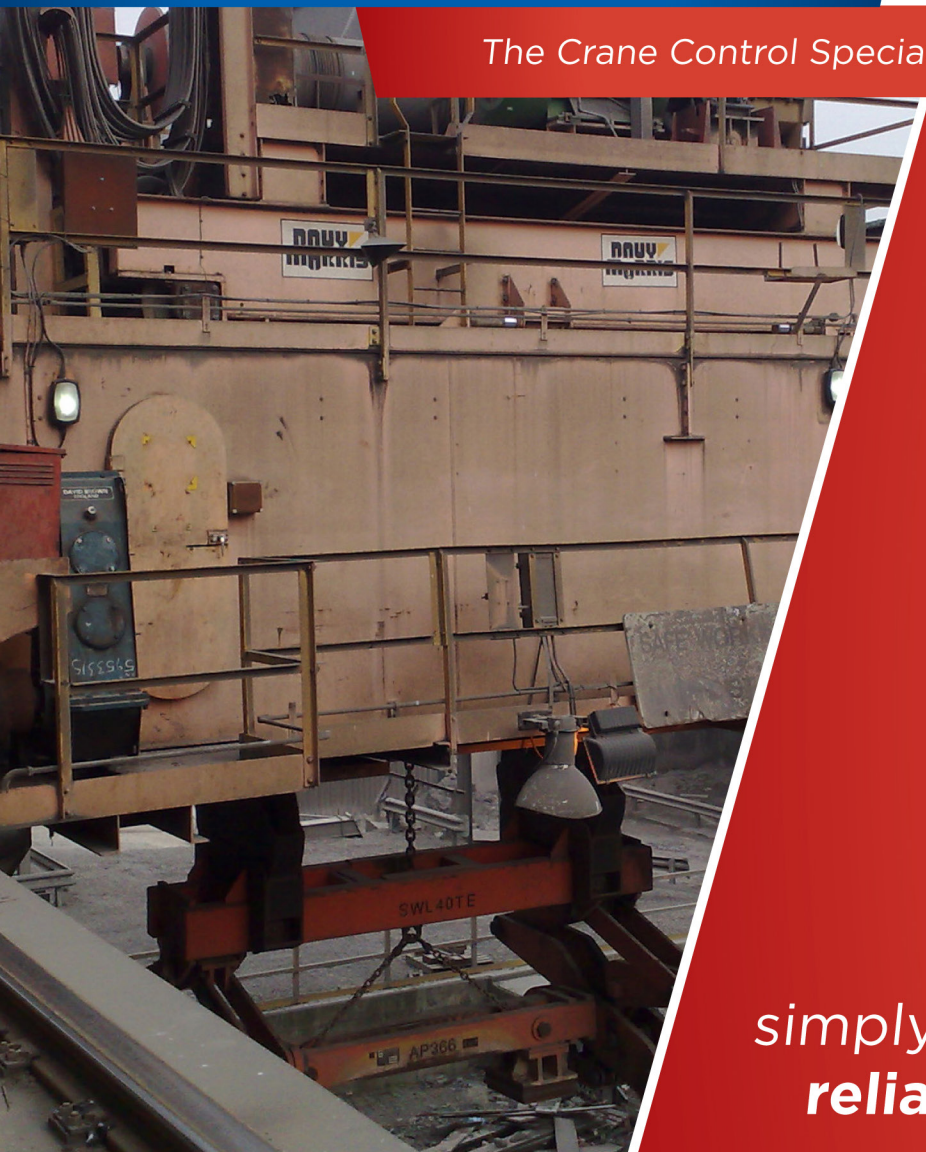
MH AUTOMATION INTERNATIONAL

our **expertise**

The Crane Control Specialists



simply **reliable**

Case Study: Upgrade and Refurbishment

40 tonne Semi - Goliath Slab Handling Crane
Tata Steel - Port Talbot

Features and Benefits

- **Improved production**
- **Smooth load control**
- **Improved safety**
- **Ease of fault finding and repair**
- **Improved customer satisfaction**
- **Increased reliability**

The Challenge

The Slabyard Crane was a constant source of breakdowns and call-outs, affecting production and causing repeated crane outages. The environment in which the crane works is very hot and dusty and the electrical house is often above slabs that have recently been produced by the casters. Air conditioning systems for the E-house were no longer operational and subsequently abandoned due to the constant breakdowns caused by dust and dirt. The electrical control system was exposed to excessive vibrations caused by the long travel leg at floor level driving over stones that the road based slab carriers knocked onto the rails.

The Solution

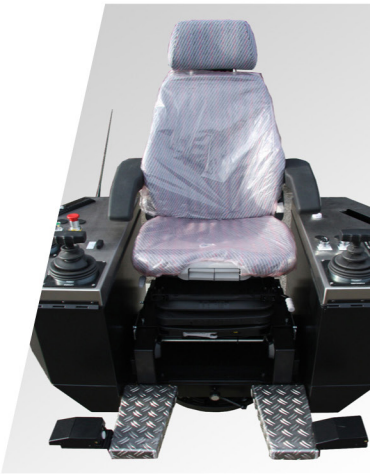
MH Automation International provided an economical, yet robust and reliable electrical control system upgrade. This included the Digital Thyromat control system which is uniquely designed for hot and dusty applications. The existing slip-ring motors were retained and new stainless steel grid resistors supplied to match the new control system. MHAI completed this turnkey project within a 7 day crane outage.

The new control system has performed exceptionally well since the upgrade and has proven to be extremely reliable under these arduous conditions. The second crane was subsequently completed in November 2008.

Key Project Elements

Motor and Drive Technology

- Digital Thyromat slip-ring motor drive system
- High torque and drive capacity
- Keypad and display for parameters and fault reporting
- Ambient operating temperature up to 60 degree celcius
- Robust construction provides high vibration tolerance
- Existing slip-ring motors retained
- New stainless steel grid resistors complete with enclosures
- Keypad and display for operating information, parameters and fault reporting
- 216kW main hoist, 2 x 60 kW long travel, auxilliary hoist and cross travel motions

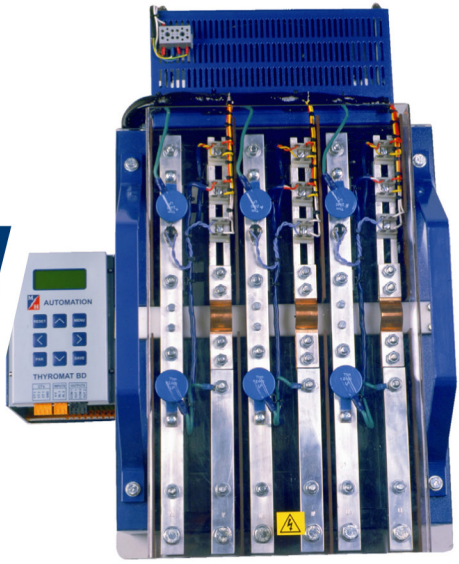


Benefits

- High motor torque characteristics retained and enhanced
- Smooth acurate control of both motor speed and torque
- Zero current switching of contactors therefore increased reliability and less maintenance
- Smooth acurate control of both motor speed and torque

Control Chair complete with:

- Motorised Rotating Operator Console
- Consoles with hinged stainless steel lids
- Textile covered seat with headrest and armrests
- Motorised seat height and tilt adjustment
- Seat spring hydraulic suspension system
- Motorised seat fore and aft adjustment
- Sensor status checking circuts
- Footrests & 2 Footpedals (1 klaxon, 1 brake)
- CD/Radio and Speaker



PLC & Motor Control Technology

- Independent PLC monitoring system
- Provides operational and maintenance data
- Fault history and recording
- Access via touchscreen HMI
- Remote I/O to drivers cabin resulting in very few control cables
- Live monitoring of motor data and control system relayed to engineer's PC and available plant wide on the Plant Information System

Contacts

Physical Address
MH Automation International Ltd
14 Swift Business Centre
Keen Road, Cardiff
CF24 5JR
United Kingdom

Postal Address
MH Automation International Ltd
14 Swift Business Centre
Keen Road, Cardiff
CF24 5JR
United Kingdom

Telephone Number: +44 2920 253300
Fax Number: +44 2920 253303
Email Address: mail@mhai.co.uk

www.mhai.co.uk

Where you can find us...

United Kingdom
MH AUTOMATION INTERNATIONAL
mhai.co.uk

South Africa
MH AUTOMATION SOUTH AFRICA
mhautomation.co.za

China
MH AUTOMATION CHINA
mhdl.com.cn