

Theme Park Water Ride Variable Speed Drive System

FOR IMMEDIATE RELEASE

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Background:

Two-speed motors, started across-the-line, were used to drive the lift conveyor, turntable, vertical conveyor, and the positioner gate for a water ride at a theme park. Across-the-line starting and mechanical braking were cause for discomfort for the riders while standing on the turntable, and for excessive mechanical drive train wear. Also, the fixed speed did not allow for speed matching between the vertical conveyor and turntable walls, causing the ride's boats to rotate while going around the turntable, which is where the riders board and un-board the boats.

Project Scope:

Jo-Kell Inc. was contracted to provide engineering, drawings, documentation, assembly, testing, and commissioning services to furnish a variable speed AC drive system to replace the existing starter system. The new system consists of a total of four variable frequency drives, mounted in a single enclosure. Control is by the customers existing plc via discrete i/o.

Comments:

The new system allows for smooth, controlled accelerations and decelerations, minimizing stress on the mechanical drive train and providing a higher level of rider comfort. Also, the speed of the vertical conveyor and turntable walls has been matched to eliminate rotation of the ride's boats, allowing for easier boarding and un-boarding from the boat. The project was completed on schedule and budget.

Jo-Kell Engineered Solutions Group

Jo-Kell has over 10 years experience in Systems and Services. We take pride in supplying reliable, high quality products, systems and services to all of our customers.

Credentials and Approvals

UL508 A Listed Facility - Industrial, Crane, Marine
Certified Crane Integrator for ABB & Cutler-Hammer Drives
Panels built to NEC Requirements, NFPA-79, IEEE, USCG and ABS Standards

Systems Capabilities

Include:

- AC & DC Adjustable Speed Drive Systems
- Navy & Marine Control Systems
- Crane Drive Systems
- Motion Control Systems
- PLC and PC-based Control, Operator Interface & HMI / SCADA Packages
- Power Distribution Panels and Portable Carts
- Instrumentation Panels

Service Capabilities

Include:

- Certified AC & DC Drive Start-Ups
- Drive Preventative Maintenance Programs
- Control System Troubleshooting and Repair
- PLC, HMI, and VFD Programming Services
- Training Seminars
- 24-Hour Service & Repair