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Harbor Portal Crane Fault Diagnosis Training Simulator

PN: 0401050080



Harbor Portal Crane Fault Diagnosis Training Simulator

Features

Harbor portal cranes are widely used in port handling,shipyards and etc.It is mainly composed by steel frame,hoisting mechanism,jib lubbing mechanism,rotary mechanism,crane travel mechanism,lifting sling device,electrical device and other safety and auxiliary equipment. The crane travel mechanism of this harbor portal crane use four independent and variable frequency motor drive system.The self-locking device of the travel mechanism adopts worm gearbox which has a self-locking function with static self-locking and stop self-locking.The rotary mechanism (turntable) uses DC gear motor can rotates 0-360°.The jib lubbing mechanism uses DC motor plus worm transmission

mode to drive pinion and rack mechanism luffing. The position of the jib luffing mechanism can be self-locked. The hoisting mechanism, jib luffing mechanism, rotary mechanism, crane travel mechanism can be controlled by the electric control cabinet with manual control or PLC.

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Performance

1. Small size, easy operation and comprehensive applicability.
2. The bench is made by cold-rolled steel with after spray, anti-corrosion treatment.
3. This education unit is made in accordance with the physical structure of a physical harbor portal crane to demonstrate the actual work conditions of a harbor portal crane and to make students understand the crane system and training in practice.
4. It can complete the complex co-operate or single-operate of hoisting, luffing, rotating and traveling actions.
5. This harbor portal crane unit can be used for repeatedly disassembly and assembly training to make students understand in depth the structure and working principle of the various parts of harbor portal crane.
5. Dual control modes: manual control and PLC.
6. This education unit is effective to educate the troubleshooting and inspection theory/training.
7. With leakage protection, three-phase output voltage: 380V / 220V. When earth leakage current exceeds 30mA, the power supply will cut off

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Typical Training Contents

A. The portal crane manual operation and automatic control demonstrating and training;

1. The crane travel mechanism manual operation and automatic control demonstrating and training;
2. The jib luffing mechanism manual operation and automatic control demonstrating and training;
3. The hoisting mechanism manual operation and automatic control demonstrating and training;
4. The rotary mechanism (turntable) manual operation and automatic control demonstrating and training.

B. The structure and working principle of various parts of portal cranes observing, disassembly and assembly training

1. The structure and working principle of travel mechanism observing, disassembly and assembly training;
2. The structure and working principle of jib luffing mechanism observing, disassembly and assembly training;
3. The structure and working principle of rotary mechanism (turntable) observing, disassembly and assembly training;
4. The structure and working principle of hoisting mechanism observing, disassembly

and assembly training.

C.The frequency control theory and application training

- 1.Control parameter setting;
- 2.External interface extension application.
- 3.Frequency principle demonstration

D.Travel motor PLC control training

- 1.PLC program instructions cognition;
- 2.PLC control training program editing.

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The Main Technical Parameters

- 1.The main bench size: 1200X700X2100mm (wingspan radius 1500,retractable maximum arm 2500mm)
- 2.Console Dimensions: 500X500X800mm
- 3.Power supply: 380/220VAC \pm 10%; 50HZ; three-phase five-wire, grounding resistance 4 Ω .
- 4.The interior height of the training room is greater than 3M.