

CASE STUDY

South Carolina State Ports Authority



The South Carolina State Ports Authority (SCSPA) owns marine terminals in Charleston and Georgetown, South Carolina and operates them with its own staff. SCSPA staff operate container cranes and the container yard equipment.

The port facilities are part of the vital international trade infrastructure for the United States. Known for high productivity, South Carolina ports provide efficient access to global markets for American exports and a secure supply chain for imported goods.

The SCSPA has 59 personnel in the Heavy Lift Maintenance Department, who are responsible for the maintenance, repairs, and upkeep of the container cranes and container yard equipment. This includes supervisors, industrial electricians, heavy lift mechanics, technical specialists, and both electrical and mechanical apprentices.

The Problem

The SCSPA employs both electrical and mechanical apprentices who must complete two or four year training period which includes college courses and on the job training. The local technical college that the apprentices attend does a great job teaching fundamental knowledge, according to Jim Strohm, an Assistant Supervisor in the Heavy Lift Maintenance Department and responsible for training both mechanical and electrical technicians

However, despite the college courses, Strohm and his colleagues were finding that both their mechanical and electrical technicians had weaknesses with basic electrical troubleshooting skills.

The SCSPA needed to find a way to train their apprentices in the art of troubleshooting.

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“We were hoping to find a method to upgrade troubleshooting skills that was hands-on training which didn’t require dedicating manpower for one-on-one instruction,” says Strohm. “We also didn’t want the expense of purchasing (or building) an electrical trainer for this purpose.”

The Solution

In September 2009 Strohm came across the **Simutech Training System** software and downloaded a demo of **Troubleshooting Electrical Circuits**. Impressed with the demo and feeling that the software would be able to fill their training need, he purchased the program.

After integrating the **Troubleshooting Electrical Circuits** program into their on-the-job training, the benefits were seen immediately.

“In one instance, an apprentice who had completed the training was able to quickly find and clear a ground in a circuit,” says Strohm. “This was after numerous unsuccessful attempts by a qualified craftsman without the software training.”

One of the benefits that the SCSPA has taken full advantage of is the ability for trainees to train on their own, reducing individual instruction time and saving costs in manpower utilization. Letting their employees train without constant supervision is not a concern for Strohm and his colleagues.

“We are very happy with the training and methods used in this software,” says Strohm. “It leads them down the right path and gives them the proper direction to learn how to safely and efficiently locate problems in electrical circuits.”

The Result

As a result of incorporating the **Troubleshooting Electrical Circuits** program into their on the job training, the SCSPA has achieved their goal of upgrading the electrical troubleshooting skills of both their mechanical and electrical apprentices, while saving costs in training equipment, training time, and manpower resources.

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The training worked so well for the apprentices, giving them such a good foundation for real world skills, that the SCSPA started scheduling all of their technicians for training with **Troubleshooting Electrical Circuits** on a recurring basis. As an example, they have used the software to reinforce the skills of their mechanics, who are primarily heavy equipment specialists.

Strohm says that the software training has helped their experienced technicians improve their electrical skills, and he is impressed with the realism of the program.

“I was personally surprised at how realistic the circuit response is simulated. The training is very close to what they would see on real equipment without the expense of a costly simulator.”

Since introducing **Troubleshooting Electrical Circuits** into the training program with such success, the SCSPA has also started training their electrical apprentices using **Troubleshooting Control Circuits** and **Troubleshooting Motor Circuits**, with similar positive results.