BOSTONtec

Ergonomic Workstations

Wire Harness Processing: Simple Change for Big Gain

Summary

A subsidiary of JANA Corporation, Aircraft Systems and Manufacturing (ASM) produces a wide variety of wire and cable harnesses. Driven by increased demand, ASM began looking for ways to improve productivity with a focus on reducing unnecessary operator motion. They implemented BOSTONtec electric height adjustable wire harness board frame processing stations which:

- Reduced stretching, stooping and excessive operator movement
- Increased processing accuracy
- Improved processor productivity

Challenges

Prior to implementing the new workstations, frames were built in-house utilizing peg boards and two-by-four lumber mounted on walls for working vertically; boards were place on A-frame bases for working horizontally. Both options were challenging and time consuming to adjust for the numerous sizes of harnesses and operators. The difficulty caused processors to reposition their bodies instead of the boards leading to unnecessary stretching, bending and skeletal stress.

ASM's goal was to reduce the strain on the operators without sacrificing wiring accuracy.

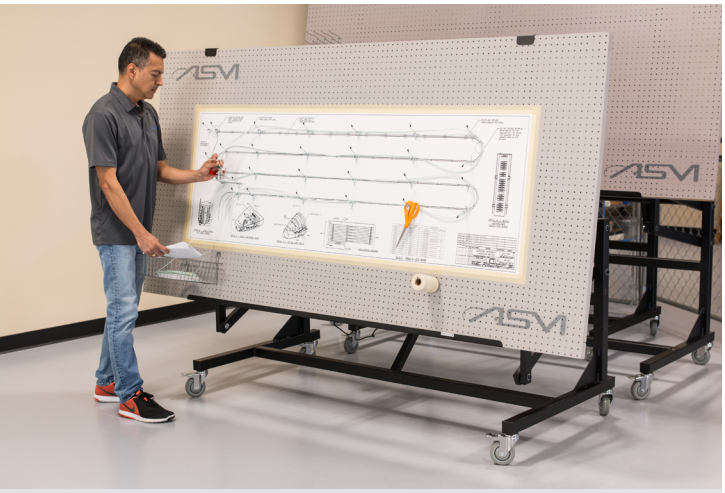
"We evaluated how we were securing the layups for assembly and knew there was room for improvement," explains Ken Schmidt, ASM manufacturing manager.

"We increased productivity, increased wiring accuracy and just as importantly, improved the quality of work life for our operators."

-Scott Anderson
Marketing Manager
JANA Corporation

jana
janacorp.com

BOSTONtec wire harness board frames in multiple postions



Processor wiring on frame in standing vertical postion

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Solution

ASM implemented multiple BOSTONtec electric height adjustable tilting workstations in late 2017. The units allow processors to raise the board from 36 to 62 inches at the press of a button. The tilt mechanism provides positioning of 0-degrees (horizontal) to 90-degrees (vertical).

The stations expand to handle wire harness boards up to 48 inches deep and 96 inches wide. Multiple units can be linked together to accommodate larger boards. ASM manufacturing technician, Tim McKenzie notes, “We wire harnesses from 20 to 100 feet long. With multiple stations we have the flexibility of setting two stations side-by-side for longer jobs when needed.”

Results

Ease of adjustment means operators are consistently repositioning the boards rather than their bodies which reduced the unnecessary movements and improved productivity. Taller processors no longer hunch over boards set too low; shorter users don’t have to stretch to reach boards set too high. Different size operators can now use the same workstation each in a customized ergonomic position that is right for them.

According to McKenzie, “Manipulating the boards is faster and easier now. We’re working in much more comfortable positions and the stations hold our boards securely in place which has increased our wire processing accuracy.”