ADVANCED COATING TECHNOLOGY ADDS LAYER OF ERGONOMICS TO COATING PROCESSES WITH CUSTOMIZED PRO-LINE WORKBENCHES

In March 2008, Advanced Coating Technology (ACT) of Middletown, NY began an ambitious $50-million expansion, constructing a new 40,000-square-foot building that would accommodate the manufacture of three different coating applications (two of which were new to the company), as well as other applications, conference rooms and offices.

In the midst of a terrible national economic climate, ACT is clearly a company that is finding a path to success, with new capabilities and innovative processes. In fact, the company, formed in 1992 as a joint venture with Chromalloy and Pratt & Whitney, has doubled in staff size over the last year and a half up to its current 68 employees.

ACT's role is crucial to the performance of Pratt & Whitney's jet engines. The company's thermal burner coatings are applied to a range of commercial and military engine parts, providing an essential heat resistance to the burner section of the engines. Recently the company made dramatic additions to its coating capabilities. Where ACT used to perform solely ceramic coating via Electron Beam Physical Vapor Deposition (EBPVD), the company has now expanded its repertoire to include Low Pressure Plasma Spray (LPPS) metallic coating and Air Pressure Spray (APS) ceramic coating. With the

metallic coating in particular, ACT's scope of capabilities has greatly increased. Whereas the company used to coat just engine parts such as blades and vanes, ACT is now capable of coating an entire ground cast -- a complete piece of metal.

Applying the right bench.

One of the key concerns in outfitting the new building and its new coating departments was finding suitable workbenches for its technicians, or “detailers,” to work. Steve Schelling, purchasing manager at ACT, was largely responsible for specifying the new benches.

“We knew we wanted benches that could duplicate the capabilities of the Pratt & Whitney workbenches we used in the original building,” Schelling said. ”Our initial search was guided by that need for specific functionality, as well as a desire to pinpoint the best value. Grainger is our corporate contract supplier, and we saw workbenches from Pro-Line on its Web site.

From there, we went to the Pro-Line site (www.1proline.com) and soon got in touch with them.”

A sound move, considering Pro-Line, based in Haverhill, Massachusetts, is recognized throughout the industry as a leader in ergonomic workbench design. In fact, Pro-Line is credited with the \production of the first hand-crank, height-adjustable tables in 1987.

After carefully examining the Pro-Line offerings, Schelling decided that the company's Millenium II electric height adjustable workbench could perfectly address ACT’s range of application needs.

One bench that rises to the occasion.

"The Millenium II not only fit within our budget, it easily meets the needs of an array of applications while providing tremendous ergonomic advantages," Schelling said. The Millenium II can be programmed by operators using a single switch to preset up to three heights into memory, or users can push an override button to set the bench at any desired height.

Schelling continued, "Each workbench is being utilized by a range of different detailers. We usually operate with three shifts, and our technicians range from 5-feet tall to 6-foot-4. They are performing myriad tasks: loading coaters with parts, applying parts to a fixture, collecting data from parts. Regardless of the task, however, the Millenium II helps to eliminate the potential for any employee stress or strain."

Another key factor for Schelling and ACT in opting to work with Pro-Line was the Pro-Line's ability to customize its equipment to meet unique needs. The new benches ACT would be using in its Metallic LPPS department required downdraft cut-outs on two sides of the bench for cooling of parts and pulling hot air down away from the equipment operator; benches in the new Ceramic APR department needed downdrafts on one side of the bench.

"We sent Pro-Line photos of benches that Pratt & Whitney was using, in order to highlight some of our custom needs," Schelling said. "Within days, Pro-Line sent back a blueprint - their work was dead on. The customization went very smoothly."

Accessing the right accessories.

Millenium II workbenches are available with an array of "in-stock" optional accessories. ACT took advantage of this, equipping its new benches with accessories

both above and below the worksurface.

ACT was in the process of going as paperless as possible, so they purchased CPU holders for every bench. Each bench holds dual computer screens and offers a convenient place for all computer equipment. Other Millenium II accessories selected by ACT include a conveniently tucked away yet accessible drawer below the worksurface, used for storing frequently used items like cotton gloves; an articulating bin holder, customized by Pro-Line to hold a tool board for point-of-use hand tools; an above-the-surface shelf; a regular strip to hold plastic bins; a convenient powerstrip; and a four-bulb inspection light on an articulating arm.

The benches are built almost entirely from stainless steel, including the worksurfaces. That's because stainless steel is highly unlikely to serve as a conduit for contaminants.

Today the Pro-Line workbenches are located throughout the new facility, serving as the ideal complement for four new metallic coating machines, two new ceramic coating machines, and other new equipment such as surface finishing machines. Productivity at ACT is as high as ever, with parts and cast constantly being coated. But Schelling assesses the true success of his purchase by seeking the opinions of his team of detailers.

"Our crew is extremely picky, exactly what you might expect from a team of detail-oriented technicians," he said. "And I can tell you that, with the ergonomic comfort and high functionality, everyone is very pleased with the Pro-Line benches."

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