Member Profile

Member Profile: Advanced Coating Technologies

Year founded: 1992

Location: Middletown, NY

Products: Applies thermal barrier coatings to military and commercial turbine engine components.

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Advanced Coating Technologies in Middletown, NY is a joint venture between two rival companies, Pratt & Whitney and Chromalloy. The set up of the two rival parent companies using the expertise of each in combination to applying thermal barrier coatings to aircraft engines, makes ACT a fascinating success story.

This collaboration began in 1992 as a way to apply Pratt & Whitney's proprietary coating systems to aircraft engine parts using Chromalloy production know-how. Pratt & Whitney developed these coating systems, and Chromalloy excelled at actually executing them. While the two companies are fierce competitors in some areas of the aircraft engine industry, Pratt & Whitney and Chromalloy recognized the mutually-beneficial opportunity that a partnership represented. For the past 19 years ACT has blended technical and production know-how from both parent companies, yet has done so in a "firewalled bubble" that ensures the intellectual property of both parents is protected from the other and is only used within the scope of ACT's operations. The joint venture and protection of intellectual property is overseen by a team of four executives – two from each parent company – who are responsible for coordinating the activities of almost 100 Advanced Coating Technologies employees.

Advanced Coating Technologies applies specialized thermal barrier coatings onto "hot section" parts of commercial and military aircraft engines manufactured by Pratt & Whitney. The temperatures these parts are exposed to in an engine exceed the melting point of the alloys the parts are made from. The thermal barrier coatings applied by ACT ensures the parts can be safely operated in such an environment.

ACT uses state-of-the-art, highly-specialized coating, surface finishing, and support machinery to apply these coatings. While ACT can't divulge the specifics of many of these machines, some are custom-made pieces equipment costing in excess of $20 million each to build and install.

What makes ACT stand out from their competitors is their ability to provide the highest-quality coatings with the fastest turnaround times in the industry, all at the lowest cost possible. What has made this achievable is the combination of active and engaged employees, who care and take immense pride in what they do, coupled with the use of an operating philosophy called "ACE". "ACE" stands for "Achieving Competitive Excellence", and is Pratt & Whitney's comprehensive operating philosophy that combines world-class lean manufacturing principles with a robust employee health and safety environment, all intensely focused on continuous improvement and customer satisfaction. ACT's status as a world-class manufacturer was recognized in 2007 when the parent companies not only extended the joint venture for an additional 15 years, but invested almost $46 million to expand the size and scope of the operation almost five-fold.

Being a Council of Industry member has benefited Advanced Coating as they have expanded over the past several years. The Council of Industry was able to provide leadership training to new front-line supervisors, as well as training to employees at all levels on the subject of lean manufacturing. As members of CI, the contacts ACT has made through the Council has opened doors regarding insurance programs, staffing solutions, logistics for further expansion, and a general ability to network with other Hudson Valley manufacturers.

Advanced Coating Technologies is a rare example of competitors coming together to make a very successful joint venture. By keeping the focus on the important issues, having a great product and an efficient way to produce and/or apply it, a workforce that is engaged and striving to put forth the best product possible, and a hunger to constantly improve and make things better, ACT has beaten the odds and made the venture work.