

PROCESS TECHNOLOGY

...IN AEROSPACE

Southwest United Industries in Tulsa, Oklahoma is a NADCAP -certified manufacturer of aircraft and aerospace parts. Over a number of years, Southwest has had significant experience using Thermax² heat exchangers driven by steam to heat process chemistries used in aircraft parts finishing. But, it was a troublesome cooling application that recently brought United their greatest satisfaction with Thermax². Southwest was experiencing failures of 316L stainless steel coils in their 12% hard sulfuric anodizing process, so they looked at Thermax² as a potential solution.

While Thermax² is often used for cooling, it has not been recommended for cooling sulfuric acid. United was willing to take the risk. Southwest said that in the 15 months they have had the units in operation, they have been completely satisfied with the results. In this case, Southwest plumbed five 7.8 ft² Thermax² units in parallel to support a flow rate of 130 gallons per minute. Its chilled water and glycol coolant mixture arrive at the exchanger at 22°F and the process chemistry is efficiently maintained at a steady 34°F. When asked if the five units have trouble keeping up with the heat produced during anodizing, Southwest said they believe they could do the job with four of the Thermax² exchangers, which allows them to replace a single unit without shutting down the process. So far, there's been no indication of any problems.

Compared to a plate and frame exchanger, the Thermax² solution was less than half the cost and had no flow rate issues. Southwest achieved full payback in about 3 months!



<http://www.processtechnology.com/inline-heat-exchangers-spiral-plate-thermax.html>

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