Whether your destination is around the globe or into space, TORAYCA® carbon fibers will most likely help your aircraft get there faster. The carbon fiber manufacturer’s products are found in commercial planes, satellites, rocket motor casings, and expendable launch vehicles. From lightening a firefighter’s load to making an automobile more fuel efficient, lightweight tanks made from TORAYCA fiber are replacing heavy traditional metallic pressure vessels. And if you play golf, tennis, ski, or bicycle, it’s odds on you’ll get a competitive edge with the TORAYCA carbon fibers in your clubs, racquets, skis, and bike components.

TORAYCA carbon fibers are manufactured by Toray Industries, Inc of Japan, the recognized worldwide leader in the carbon fiber industry that pioneered the development of PAN-based (polyacrylonitrile) carbon fibers over 30 years ago.

In 2006, Toray Carbon Fibers America, Inc. began construction on an additional line at the Alabama plant in Decatur, Alabama to supply carbon fiber for Boeing’s new line of 787s. At the time, Yasuo Ueda, the Worldwide Director of Construction, directed Phil Fitzgerald, AutoCAD Senior Designer in Engineering/Maintenance, to “go get a document management system.” The goal was to manage and track the plant’s 20,000 drawings, PDFs, MS Excel, and Word documents.

“The Site Visit Sold Me”
Fitzgerald systematically immersed himself in researching and evaluating the best-in-class engineering document management solutions. After a few weeks, he narrowed down his choice to Synergis Software’s Adept. But the decision to move forward with Adept came after he visited an Adept customer in Tupelo, Mississippi, a three and a half hour car ride from Decatur. It was during that site visit that Fitzgerald realized the full potential of engineering document management.

“I was very impressed by how easy Adept was to use,” states Fitzgerald. “But what really amazed me was how this company was able to integrate Adept throughout all their different departments. They literally had every single document—from the design phase; to the engineering phase; to the creation phase through manufacturing, plus shipping and technical manuals—all managed and tracked in Adept.”

When Fitzgerald returned to Decatur, he fast tracked the evaluation by enrolling in a five day Administrator training class at Synergis Software headquarters. “When I came back from the class, I thought, okay, ‘where do I start’? I decided to invest in the Adept Pilot program to get more in depth training. With the help and patience of the Synergis Software application engineer, I got Adept installed on the server and the client, and was up and running in 16 hours.”

Replacing Paper with Smart Documents
After a successful pilot, Fitzgerald’s next step was to implement Adept in the engineering department. His first challenge was to get all the plant drawings from Japan into Adept. Because the drawings were non-AutoCAD documents, he had to scan the drawings and make them “smart”—meaning he had to add attributes, or metadata, to the documents to make them searchable in Adept’s database. Fitzgerald hired a contractor to do the scanning and leveraged Adept to add intelligence to each document.
“The only place in the drawings where we had attributes was in the title blocks,” recalls Fitzgerald. “Thankfully, Adept’s full text search capability lets you find and index each piece of text that’s in any drawing. This allowed me to search for all the drawings that had a project name inside the document that, let’s say, began with ‘CFA3’ and then sign them all into a specific project library or update them to include more information. Using full text search literally saved us two to three years worth of work.”

With Adept running in the plant, engineers were using it to locate drawings, instead of doing tedious manual searches. Notes Fitzgerald, “The more the engineers used Adept, the more they saw the huge time savings. We used to spend hours looking for a document and now we can find it in five or six seconds.”

**Winning Fans with Proven Technology**

While Fitzgerald’s team ramped up their use of Adept, they were asked to demonstrate the solution to other top managers in the plant. Fitzgerald invited the President, the Plant Manager, Purchasing, and the head of Quality to a demonstration of Adept’s capabilities.

“I knew it wasn’t just engineering who needed Adept,” comments Fitzgerald. “We had many departments that could benefit from accessing engineering information.” He prepped for the presentation by getting all the document information and drawing attributes for the plant’s “tank farm” into Adept. “I wanted to show how anybody in the plant could find a document quickly—whether it was a large 50,000 gallon tank or a small transmitter.”

Nancy E Vancil, QA Manager and Manager Representative for AS9100 and ISO9000, was one of the managers who attended the presentation. Vancil had her own document challenges. Her department has to uphold compliance with AS9100 for the aerospace industry by maintaining a dynamic document control system.

Says Vancil, “Maintaining a robust document control system in which all quality management system documents can be monitored and controlled company wide, including our Dallas office and Satellite office in Salt Lake City, Utah, has to be accomplished in order for us to keep our AS9100 certificate.”

Vancil also needed to be able to manage and route nearly 1,000 quality system documents electronically and improve access to all employees. To accomplish this goal, she needed to control access to documents, provide easy document revisioning, and enable electronic signatures. Adds Vancil, “I wanted to make sure that the software could handle 99% of our documentation requirements. We really needed a secure system that ensured that only the latest documents are available for use by the company’s employees.”

Within a few months of the presentation, Vancil had the Quality department using Adept. Now the department has all their documents in Adept, including quality manuals, procedures, work instructions, process control documents, industrial standards, and customer specifications.

**An Efficient, Sustainable Platform for Document Management**

While the document management initiative at Toray Carbon Fibers America started in engineering, the benefits have rippled out to other departments. Fitzgerald envisions many more people in the plant taking advantage of Adept.

“One of my functions in the engineering environment is to help others in the company locate the information they need,” adds Fitzgerald. “It might take another year or two to get rid of all the paper—and we still have a lot of it—but by proliferating Adept to other departments, we could achieve lighter weight, more sustainable plant management processes in the years to come.”