

# 1200 TANKS



One plan provides different coatings solutions for oil company's tanks

**M**ore than 1,200 petroleum product tanks are spread out on 88 Marathon Ashland light product and asphalt terminals throughout the United States.

While the tanks may appear similar at a glance, in truth, they are as different as 1,200 snowflakes. Most were built at different times and were originally coated with different products. They've weathered different environments, and have undergone local coatings maintenance with varying degrees of diligence.

So when Marathon Ashland corrosion specialist Tim Blair, purchasing agent Brad Wietholter and accountant Julye Reneau were charged with bringing maintenance and painting on the entire group of tanks up to speed, they knew a one-size-fits-all solution simply didn't exist.

"We knew that the overall appearance of the tanks could be improved more efficiently, but we needed a detailed program to direct our effort," says Blair. "What we needed to do was to bring

all of them to a maintenance-level program rather than allowing them to be treated on a reactive level. We knew that would require different responses at different sites."

The Marathon Ashland paint team also recognized that they could use some expert help in this area. What they got was a solution that not only assessed the condition of their tanks but provided a maintenance plan for well into the future.

## PAST PARTNERS

Since ProTherm, an industrial painting contractor, and Marathon Ashland had partnered successfully on past painting projects, Blair thought of the Houston-based service organization initially to help his group determine the condition of the tanks. Mickey Reilly was among those who responded to Blair's call with a presentation of the ProTherm Total Corrosion Management program.

"What they needed was a catalogued condition analysis," says Reilly. "There are several com-



Painters took on the first of 1,200 petroleum product tanks at Marathon Ashland terminals last summer

ponents in our program, and one of them is a condition survey in which we conduct a systematic evaluation of each of the customer's assets."

The coating condition assessment form is remarkably thorough. More than 40 coatings-specific considerations are addressed. Most are analyzed to the degree of their presence and weighted for their overall importance. For example, the presence of dirt or chalking are each noteworthy defects when assessing the condition of a tank, but are considered significantly less important than the presence of general rusting. For that reason, each defect will be measured for its extent, but a weighted scale will apply a multiplier of 10 to the measurement of rusting. Comparatively, the measured extent of dust and chalking will be given a weighted rating of 1.

"What we'll do then is input this information into a baseline program that can sort it out and rank the customer's assets in terms of need and priority," says Reilly. "Tim realized this program would give him a permanent record, as well as

giving him a basis for making good economic decisions on where to paint."

Marathon Ashland project management approved the plan in August, 1999, and they asked ProTherm to complete the survey by December, 1999. Reilly was pleased, but there was a sticking point.

"We knew we didn't have the resources to get this done internally," says Reilly. "We needed a partner with unique capabilities."

#### NATIONWIDE PRESENCE

Reilly contacted Donnie Thompson, the Southwest Division Sales Manager for the Sherwin-Williams Industrial and Marine Coatings division.

"I asked him if he'd be interested in partnering in this surveying activity," says Reilly. "But then I said, 'Here's the rest of the story. It's going to be some work.'"

Reilly explained that his firm could assess the terminals where ProTherm had a presence, such

#### At a Glance

##### PROJECT

1,200 petroleum product tanks at various Marathon Ashland terminals

##### COATING SYSTEM

Primer: Epolon II Primer, 3.0-4.0 mils dft  
Intermediate: Macropoxy HS, 3.0-4.0 mils dft  
Topcoat: Tile Clad High Solids, 3.0-4.0 mils dft

##### CONTRACTOR

ProTherm Services

as in Texas where the company is headquartered. He wanted to count on Sherwin-Williams' nationwide presence to handle surveys in areas of the country where ProTherm had no personnel.

Thompson was quick to offer Sherwin-Williams' resources to the project. Within weeks, 18 Sherwin-Williams corrosion specification specialists and other personnel were in Houston, undergoing intensive training in the ProTherm condition assessment methodology. After three days, each left with packets that included digital cameras and computer discs for logging detailed observations on each of the 1,200 Marathon Ashland tanks.

In less than three months, all of the data was collected and submitted to Chris Woods, a corrosion specification specialist with Sherwin-Williams in Houston. Woods moni-



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tored collection of the data before turning it over to Blair.

“It would have been hard for us to do that,” says Reilly of Woods' efforts. “Having a single-point contact really made it easy to monitor the progress of this project and was a key factor in its success.

“The commitment we received from Sherwin-Williams was outstanding. The guys who got the assignment really went out and busted their tails. It was really a remarkable undertaking.”

Blair received the data in December, 1999, and spent part of the winter prioritizing and planning painting activities for the upcoming season. By March, 2000, ProTherm crews began taking to the field at the sites where they were needed most under the watchful eye of ProTherm supervisor Clifford Forrester.

Now underway, projects include full removal and repaints on many of the tanks, which range from 20,000 to 30,000 square feet in surface area. For these jobs, the tanks are shot- or grit-blasted to a 2.0 to 3.5-mil anchor profile, then coated with a three-coat Sherwin-Williams epoxy system. First is a

prime coat of Epolon II Primer, followed by an intermediate coat of Macropoxy HS, and topped with a finish coat of Tile Clad High Solids, each at 3.0 to 4.0 mils dft for a total film of 9.0 to 12.0 mils dft.

Overcoating the existing finish is occurring on about 25 percent of the tanks being painted. After a full wash and power tool cleaning, painters are applying coats of Macropoxy 920 at 1.0 mils dft, and Macropoxy HS and Tile Clad High Solids, each at 3.0 to 4.0 mils dft.

Each tank is brushed and rolled to eliminate the possibility of overspray, and each is painted white in order to reduce the heat retention capacity of the tank exterior, thereby reducing vapor loss of the product within.

In order to tackle the project most economically, Blair has prioritized terminals, each of which typically host 12 to 15 tanks, rather than addressing prioritized individual tanks in order, an approach that would have painters spending as much time travelling as painting. Once painters are at a terminal, they tackle the highest priority tanks first, but low priority tanks at these sites are also being painted in order to take advantage of the presence of the painters.

Forrester reports that the execution of the projects have gone smoothly with the exception of an unusually high level of weather delays. He expects to be finished with as many as 100 tanks by the end of 2000.

“We understand that we have to work around their schedule,” he says. “They make their money by moving product, and they might have to pump cold material into their tanks while we’re working. If the dew point is 60 or 65 degrees, that’s when the tanks start sweating, but we monitor the weather and take full advantage of the optimum times to paint.”

## **LONG-RANGE PLANNING**

For Marathon Ashland, the program has addressed a pressing need, but it has also laid out a plan to keep coatings-related maintenance from ever becoming a pressing need again.

“We’ve got a 10-year plan now, and we’ve laid the foundation for recordkeeping that will project the plan well beyond 10 years,” says Blair. “We can also forecast our coatings-related expenditures into the future.

“There’s definitely a level of comfort in that.”