



Launching A CLEAN IMAGE

Bath Iron Works puts a new face on an old industry

When a new product comes off the line at many companies, the event is marked with no more fanfare than a press release.

At the Bath Iron Works (BIW), however, such an event can draw a VIP crowd from all corners of the world.

Such will be the case this spring when dozens of visiting dignitaries will visit the Bath, Maine, site to witness the launch of The Winston Churchill, an Aegis guided missile destroyer that will ride the seas for the United States Navy.

For the Bath Iron Works, which has produced more than 400 ships in its 114-year history, the spotlight shines frequently. And therein once lay a concern for officials of the company. Ship construction, by its very nature, is a gritty business, and it's hard to put

a clean face on such industry. But with the eyes of the world frequently turning in their direction, BIW found it was once again time for a facelift.

"We're working hard to improve the appearance of the shipyard," says Scott DeVinney, BIW coatings specialist. "Here we are in this highly visible, pastoral New England setting, with white church steeples, historic buildings and the major tourist highway in New England within sight of the shipyard. We also wanted to foster a clean, positive working environment for our employees.

"Plus there are a lot of environmental issues we are faced with. And when we installed a new landing facility, many of our people visited similar facilities in Europe and came away very impressed



with the appearance of those facilities. All together, it came down to a matter of public image, and we wanted it to be a good one.”

ASSEMBLY BUILDING FACELIFT

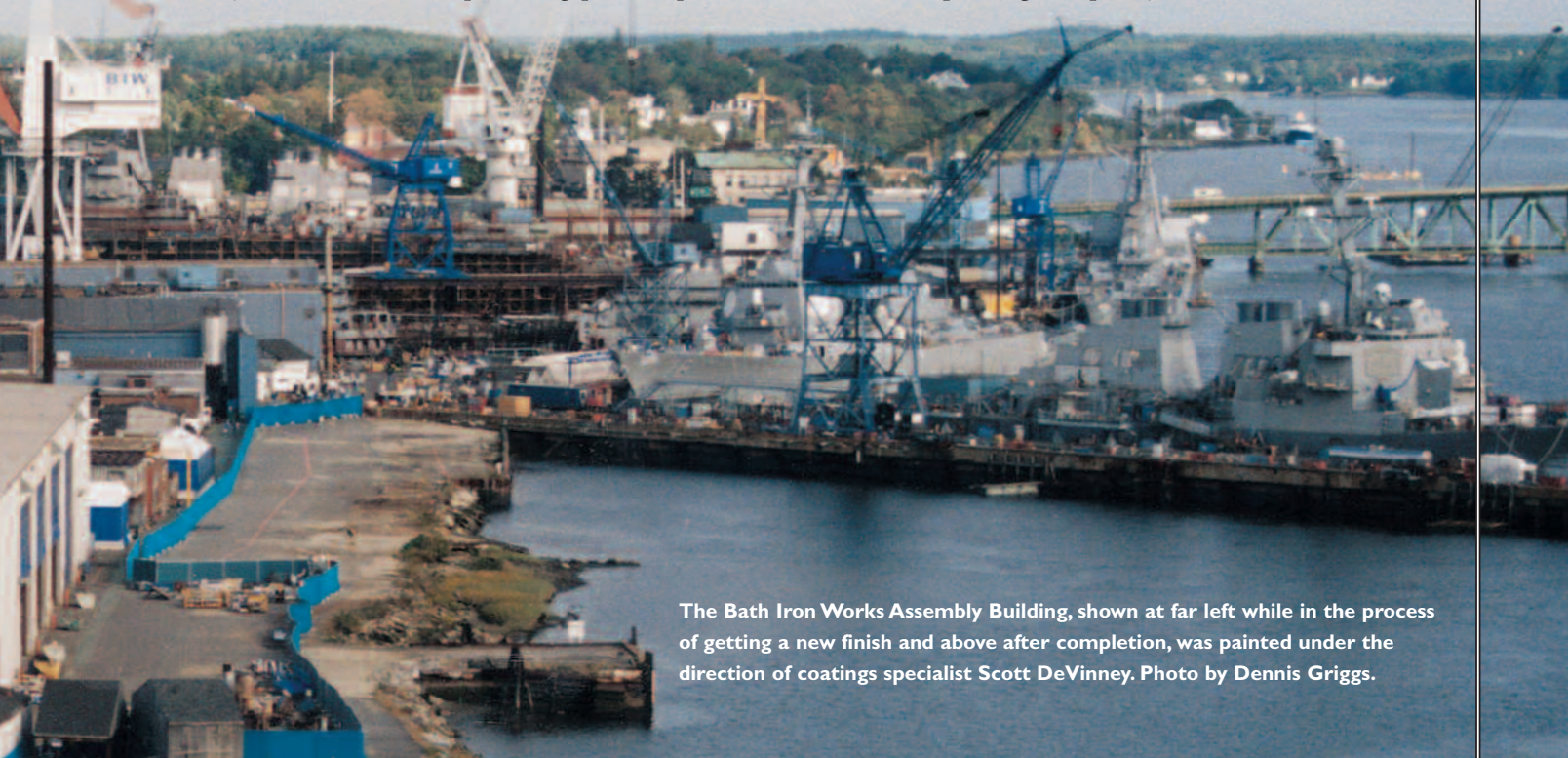
The largest building at BIW — in fact, one of the largest enclosed buildings in the state of Maine — is the 150,000-square-foot Assembly Building. The steel-sided building is host to most of the pre-fabrication work that goes into shaping the steel that is pieced together in the building ways outdoors. Outside of the ships themselves, the building is the most visible structure on the premises, and for that reason, BIW officials felt it critical that it maintain a clean appearance.

The task of coating it, however, was a tricky one from the start. The building, which bore its original paint from some two decades earlier, had accrued some severe rust staining, especially near exterior ventilation ducts where weld smoke and iron particles, according to DeVinney, had been exhausted out of the building and concentrated over the years.

Job one was to prep the surface and address these stained areas. BIW employees normally accustomed to ship coating pro-

jects began high-pressure waterjetting to clean the surface as well as applying a phosphoric acid pretreatment. But the preparation wasn't enough. The rust staining was not sufficiently removed and in other areas, a thin film of smoke residue and steel particles remained.

“It wasn't doing the job,” recalled DeVinney of the first attempt at surface preparation. “The main problem was that the phosphoric acid wash was evaporating too quickly.



The Bath Iron Works Assembly Building, shown at far left while in the process of getting a new finish and above after completion, was painted under the direction of coatings specialist Scott DeVinney. Photo by Dennis Griggs.



The corrugated steel exterior of the Assembly Building took on a new look after completion of the coating project. Below, BIW coatings specialist Scott DeVinney.



Even in the unstained areas, it appeared to be clean, but it really wasn't."

At this point, Sherwin-Williams corrosion specification engineer Bob Murphy offered several possible solutions, and he and DeVinney settled on an approach involving the use of a surface treatment solution to address the rust staining, followed by the application of the coating system. The call proved to be the right one.

"We knew the surface treatment solution could remove the rust staining," said Murphy. "Application of the solution allowed excess moisture to be absorbed from the surface and promoted a chemical reaction that treated the rusted areas.

"We were going to spot apply it to the rusted areas, but we found that it dissolved that industrial film in other areas. It also helped provide a slight etching of the surface so we were able to get better bonding of the primer."

Once the rust and film issues were resolved, BIW paint crews came face-to-face with a critical timing issue. Committed to using an environment-friendly water-based system, painters found themselves already well into October, when temperatures begin to drop along the coast of Maine.

"There were a couple of issues here," says DeVinney. "Obviously, the fact that a water-based product had minimal environ-

mental impact was very important to us. And even though a solvent-based system might have been more user-friendly at this point, there were safety issues because manufacturing in the building had to go on, and we didn't want any solvent vapors affecting the work force. We were going to stick with the water-based system."

Starting at the west end of the building, two or three-person crews, depending on availability, kept surface preparation tasks one day ahead of the primer and top-coat crews that followed.

Using airless spray equipment, painters first applied DTM Bonding Primer, selected for its outstanding adhesion properties, according to DeVinney. Even though the crews were using the product for the first time, they found application characteristics to exceed their expectations.

"These guys are used to working with High Solids Epoxies," says Roger Gagnon, a supervisor of the project. "They were pleasantly surprised by the application characteristics. This whole job turned out to be a nice deviation from the work they normally do. They really took ownership of the project."

A single coat of DTM Acrylic made up the finish, leaving a total dry film thickness of 5-8 mils and a building that no longer bears the scars of years in a harsh industrial setting.

"We got a tremendous amount of field and technical support from the Sherwin-Williams people involved in this project," says DeVinney. "For example, they brought a Sodablast machine over here when we were looking to solve our surface prep problem. They really worked to help us find a solution. It's not like they sold us some cans of paint and disappeared."

And in the end, that helped the Bath Iron Works put a new face on a facility that will soon be seen by the world. 