

# 'Patchwork'

## in the paint shop

### St. Louis team reduces painting time for F/A-18

By KATHY COOK

**T**hey cut the time required to paint an F/A-18 fighter jet by 150 hours, the gallons of paint per plane by 11 and the amount of hazardous waste by 25 percent.

They're members of the paint shop team in St. Louis, looking for ways to Lean things out while enhancing quality and keeping people and the environment safe. With the help of others across the site, they've made some impressive improvements.

First, the team eliminated a time-consuming step of the paint process by implementing new sealants. Sealants, applied to the aircraft before its trip to the paint shop, are used not only to protect it from corrosion in salt-air environments but reduce the ability of radar to pick up a plane's lines, such as where two parts are joined. The old process called for the sealant to be applied and then covered with a material that made it appear to radar waves like a continuous surface, minimizing returns. Application of the overlay coating required painters to mask off areas not needing it, apply it where needed, and sand it to a smooth surface. By replacing the old sealant with one that matches the metal "look" of the plane's surface to radar, the team eliminated the coating overlay step.

Next, they revised their process for applying specialty coatings used for classified tactical purposes. The coatings are applied to an aircraft in more than 70 different areas, vary-

ing in shape and size from a few inches to several feet. When these areas surround areas that aren't coated, painters have to mask, spray, sand and often redo portions.

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"The work was a nightmare," said Stan Bozarth, paint shop manager. "The work was time-consuming, done in very tight spaces, required sophisticated protective equipment and precluded any other kind of painting during application and an eight-hour curing period."

The solution was to create patches of specialty coatings that could be applied with adhesive. A robot creates the patches, eliminating any hazard to humans, providing consistent materials, and eliminating the masking and sanding steps as well as the time required to cure the paint. Because the patches are pre-cured, painters don't need to wear protective equipment, and other work can be performed during application. "Best of all, a lot of rework is eliminated," Bozarth said.

The team started with just a few patches, and now applies around 70 per aircraft. The time required to paint one aircraft has dropped from six days to five.

"It's great," said Steve Meintz, a High Performance Work Organization team leader and collateral inspector in the paint shop. (An HPWO is a group of co-workers who are

responsible for a common function or product, share common goals and exercise self-determination in continuously improving the quality of their output and the efficiency of their processes.) "Everything is concise and consistent. The patches can be made in any size or shape, and cutouts can be created for areas not covered by the coating."

"The new cycle helps us avoid overtaxing the paint shop and moves us toward the Lean+ goal of standard work," said Rich Tiemann, industrial engineer. Sharon Sofian, Surfaces Finishes team lead, added: "We've increased capabilities without increasing cost, and that's good for everyone."

Mike Kerr, who's worked as a painter for 25 years and who helped implement changes in the paint shop, said: "This is one of the biggest things we've ever done in the shop."

"It's really a testament to teamwork," Bozarth added. "This wouldn't have happened with just one group pushing it. It took everyone—engineering, manufacturing, the High Performance Work Organizations, and the customer—to make it happen." ■

*kathleen.m.cook@boeing.com*