

**Field Evaluation Report II
USS John F. Kennedy**

23 Sept 02

Dates of Trip: 17-18 Sept 02

Location: Naval Station Mayport, FL

Key Personnel Contacted:

Location	Name	Organization	Phone Number
NS Mayport, FL	ASC Prentice Smith	USS John F. Kennedy	(904) 270-5459 X-3879

Team Members:

Name	Organization	Phone Number
Steve Finley	HQ AFMC/LGP-EV, Wright-Patterson AFB, OH	(937) 257-8090
Mike Surratt	SAIC, Warner Robins, GA	(478) 918-2902
James Dean	SAIC, Warner Robins, GA	(478) 918-2917
Kurt Kessel	NASA AP2 (ITB, Inc.)	(321) 867-8480
Kevin Andrews	NASA AP2 (ITB, Inc.)	(321) 867-8480

Purpose of Trip:

This was to complete the first of three field evaluations to collect coating and corrosion data from previously painted support equipment (SE) test panels mounted on operational SE. The operational SE is located at corrosion prone military operating locations in the northeast, southeast, and northwest. The test data being collected includes coating gloss, color measurement readings, and a visual inspection of the test articles for any types of coating failure and corrosion.

Findings:

Note: The U.S. Air Force and U.S. Navy provided the test panels from operational SE in varying structural condition. The test panels were reconditioned at Johnstown PA and recoated with the test coatings in a manner to simulate field applications. Several small recessed areas on the panels did not receive complete coating coverage. These areas were noted in the initial coating inspection in November 2001. The survey team noted minor surface corrosion in these locations during this visit. This pre-existing corrosion is noted on the coating tracking forms, but will not be considered in the overall coating/corrosion

condition ratings for the test coatings. These corroded areas will be monitored and documented for the duration of this project.

The test coatings were applied to sectionalized panels on operational SE. Each panel was divided into 5 sections. Sections 1-4 received one of the test coating systems with the baseline coating intersecting all of the test coatings in section 5. The typical coating pattern is shown here. We have inserted gray lines on the photos to approximate the test areas. These lines are not on the test panels themselves.



Coating Systems	Description
1	DuPont Powder Coating, Gray Morning Epoxy ELH503S5055 base coat and DuPont Sky White triglycidyl isocyanuarate (TGIC) PFW510S9 topcoat
2	Morton Powder Coating Zinc Rich Gray Epoxy 13-7004 base coat with Morton Corvel White TGIC 30-1007 U1578-1 topcoat.
3	Deft zinc rich primer (44-GY-16), Deft Intermediate Primer (44W007), Defthane 0-VOC Topcoat (55GY005).
4	Aqua Poxy 912 epoxy primer with Defthane 0-VOC topcoat.
5	Coating Standard MIL-PRF-53022 primer and high solids polyurethane MIL-PRF-85285 topcoat (Colors – US Navy - gloss white color17925; US Air Force - semi-gloss forest green color 24052).

As a general note, the majority of gloss measurements taken on this survey were lower than the initial readings. However, there were several gloss measurements reading higher than the initial readings on the green-coated panels. Almost all of the readings on the white-coated panel at Brunswick NAS were higher than the initial readings. All “CIE L*a*B*TM” color measurements were higher than the initial readings. Conversations with Mr. Steve Finley (HQ AFMC/LGMP-EV) suggested that the difference in the color measurements was expected.

Although the test coating systems supplied by the vendors were required to match Federal Standard 595b, during coating application/curing we noted that the several of the colors did not exactly match the federal standard. As a result, the field evaluation will

not compare the color shifts of one vendor against another, but will track any color or gloss shifts of a particular vendors coating against a protected baseline coating sample of the same coating.

Naval Station Mayport, FL

A/S47A-1 Enclosure Panel

Test Panel Control #s J-99-OC-014-02 and J-99-OC-014-03, are assigned to the USS John F. Kennedy stationed at Naval Station Mayport, FL. The Tow tractor, which the panels are installed, is used exclusively on deck during deployments. The panels are hand cleaned with Oasis 256, Non-Ammoniated Window Cleaner, and Manufactured by ECOLAB Inc. with no rinsing and occasionally steamed cleaned when time permits. During deployments all assigned Support Equipment is cleaned daily with this product.

During the visual inspection we noticed panel J-99-OC-014-02, registration # QSJ 126 had been primed with what appeared to be a Zinc Rich primer (green in color). This primer was visible through all five-test coatings. **Note:** None of the primers applied during the initial coating applications were green. Coating thickness and gloss measurements were taken and we found that coating thickness had increased and the gloss to be extremely low when compared to the baseline measurements. With these indicators it is our opinion that this panel had been recoated and will void any useful data that could be obtained from this location.

Visual inspection of panel J-99-OC-014-03, registration # QSJ 133, found that rust had formed on coating 5 and around both hinges which are in coatings 1-4. Because of the suspected recoating of panel J-99-OC-014-02, we decided to take coating thickness measurements and found the coating thickness had increased on this panel as well. With this indicator it is our opinion that this panel had also been recoated and will void any useful data that could be obtained from this location.

Maintenance personnel assigned to the USS Kennedy were very interested in this project. We would like to note the outstanding attitude and support given by Chief Smith and his support folks toward this project and site visit. Their support was truly exemplary.