

USS DETROIT (AOE-4) SECNAV/NAVSEA



Capital Investment Labor Initiative (CILI) 1-Year Evaluation Bilge Application



A test application in the Port Shaft Alley Bilge
OF

ALOCIT AQUACOAT 28.15 EPOXY COATING FINISH

Original Application February - April 2000
1 Year Follow-up Survey May 2001



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EXECUTIVE SUMMARY

Corrosion Engineering Services, Inc. (CES) was tasked by the Commander Naval Sea Systems Command (NAVSEASYS COM) to document the 1-year follow-up inspection of the port shaft alley bilge, 5-242-2-0 on USS Detroit (AGE 4). The ALOCIT Aquacoat 28.15, 100% Solids Epoxy system was the coating applied to the bilge in April 2000. Original application was accomplished while the ship was in availability at Metro Machine Corporation of Pennsylvania at Philadelphia Naval Shipyard. CES photographed and documented the bilge conditions as of May 2001 while the ship was in port Naval Weapons Station, Earl, New Jersey.

The original specification outlined only a coat to the bilge area of the shaft alley (700 Sq. Ft.). Due to the overall deterioration of all surfaces the COMNAVSURFLANT Port Engineer requested that the scope be expanded to include the bulkheads and overhead above the bilge as well (an additional 1300 Ft. Sq.). This was accomplished.

Corrosion Engineering Services, Inc. (CES) served as the prime contractor and also accomplished the in process control and documentation. United Coatings Corporation (UCC) performed the work for CES. SUPSHIP Portsmouth, Colts Neck Detachment, followed the project closely and attended all checkpoints.

NAVSEA Task Group Instruction (TGI) Number 631-63111-003A Bilge Preservation - ALOCIT Aquacoat 28.15 (By: Power Tool Cleaning) served as the specification and was closely followed. The work specification requirements included: Surface preparation: SSPC SP-11 Power Tool Cleaning to bare metal.

Coating Application: (All material is ALOCIT Aquacoat 28.15 in 3 colors)

Bilge area:

Prime coat	White	5-7 mils WFT/DFT
Stripe coat	Gray	5-7 mils WFT/DFT
Finish coat	Terracotta	5-7 mils WFT/DFT

Above Bilge:

Prime coat	White	5-7 mils WFT/DFT
Stripe coat	Gray	5-7 mils WFT/DFT
Finish coat	White	5-7 mils WFT/DFT

The subcontractor, UCC, was tasked to provide the in-process OA. Since the CES representative was on hand throughout the process, the OA became a joint effort that produced very satisfying results with no surprises. SUPSHIP attended all checkpoints and validated the results. The test application was successfully completed with the Shaft Alley turned over to Ship's Force in April 2000.

The shaft alley was surveyed May 2001 while USS Detroit was at home port at NWS Earle, NJ. **The Alocit Aquacoat coating system is in immaculate condition with no deterioration of any kind noted.** There is standing salt water in the sump area and some mold and mildew growing (the ventilation in this space is poor). There was no corrosion of any type noted. Much of the steel in this space (bilge) is heavily pitted and without this re-preservation would be holed through (some steel replacement was accomplished in conjunction with the re-preservation in 2000).



The bilge is in excellent shape with no corrosion or coatings failure noted

- 1 Forward Stb'd corner of the bilge. The sump area shows no sign of any deterioration
- 2 Due to continual damp conditions and minimum ventilation mold and mildew can be found
- 3 The Alocit Aquacoat is performing flawlessly in severe service

