

Extended Recoat Windows for Non-Critical Zones

NSRP All Panel Meeting
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Background



Source: <https://news.usni.org>

- The build sequence of a ship no matter the size is long, and complex given all the various compartments and fixtures that must be attached at various stages along the way.
- During the build sequence, primer application occurs in various non-critical areas. Topcoats are applied much later in the build sequence closer to final assembly and closeout. By the time this stage is reached published recoat windows for the primers are often exceeded. These areas then receive various levels of surface preparation to reactivate the surfaces for topcoat application.
- This part of the process is time and labor intensive. This project seeks to review multiple levels of surface preparation to determine which is the best course when recoat windows have been exceeded.

Anticipated Benefits

Use more effective means to prepare non-critical areas where primers have exceeded recoat windows.

- Reduce cost of surface preparation by extending the recoating window on interior non-critical areas (bulkhead and overhead)
- Optimize most efficient surface preparation methods outside of recoating windows to ensure proper coating performance

Scope of Work

This project will evaluate
Goals/Objectives

- Determine the various levels of surface preparation currently implemented.
- Determine adhesion and performance effects of the differing methods to find optimal performance.
- Identify and share best practices among shipyard coating experts.



Previous Work

- Numerous studies have been done before by many different industries and even the Navy about proper surface preparation once recoat windows are missed.
 - Multiple SPC Panel Projects
- However, over the recent years as coating formulations and technologies continue to change the shipbuilding standard practices need to be able to adapt to help efficiencies in these processes.
- More recent studies have shown that minimal, if any, benefits from surface preparation on non-critical areas outside of coating windows prior to topcoating have any differences on long term performance.

Tasks

- Task 1 – Identify surface preparation methods currently used to reactivate primers in non-critical areas
 - Hold a Kick-off Meeting with the project team to discuss the current methods used to prepare primers for topcoat in non-critical areas. Best practices of all the yards will be discussed. The project team will identify testing strategies for production and long-term use.
- Task 2 – Evaluate coatings after application to prepared, primed surfaces
 - Based on the preparation methods identified in Task 1, laboratory testing of adhesion and performance will be performed on coatings applied over primers whose recoat windows have been exceeded.
- Task 3 – Final Report
 - The project team will assemble a comprehensive final report, including the results of the information review, details of sample preparation, and laboratory evaluations. The final report (or a version thereof) will be suitable for unlimited distribution.

Path Forward

- Once Funding is received continue working with project teams to complete each task of this program

Questions?

