

Chemical Cleaning and Descaling Subcommittee-Meeting Highlights
Washington Navy Yard
1333 Isaac Hull Avenue, SE
Washington DC 20376
Conference Room 3W-2001
Meeting #30
19 August 2003

INTRODUCTION

Chairmen Mr. Rich Kurz called the meeting to order at 1300 EDT. Fourteen people either called in or were present. See [Attendee List](#) below.

PURPOSE

To update all members on the current status of Chemical Cleaning in the fleet, some obstacles we continue to encounter and the POA&M for completion of total implementation of chemical cleaning for all ships.

REVIEW OF EXPERIENCE: SUBMARINE AND SURFACE SHIP CLEANING

Dynamic Descaler and GOTAR-D have been approved for cleaning of non-nuclear surface ship heat exchangers. NSWCCD observed a Dynamic Descaler cleaning of a radar cooler in the SIMA San Diego shop. The cooler was cleaned effectively. The copper levels in the final acid solution were lower than is typical for Rydlyme and Safe-D-Scale cleaning. Dynamic Descaler and GOTAR-D have lower laboratory corrosion rates than Rydlyme or Safe-D-Scale. Approval of Dynamic Descaler on nuclear ships is awaiting resolution of test discrepancies with the "Effect on protective film" procedure in the proposed CID. Approval of HERC Pipe Klean is also awaiting results of passivation testing, the original test was preformed incorrectly, and is being repeated.

Re-cleaning cycle on surface ships is estimated to be three to five years. However, USS Lincoln (CVN 72) was cleaned (Distilling Units) three times in the last 2 years.

To date, Puget Sound NSY has finished 13 flushes on 8 submarines. This includes cleanings on ASW and/or MSW. All of these were first time flushes. PSNS is preparing to flush 2 main condensers and turbine cooling systems on USS Lincoln. Pearl Harbor NSY is up to speed and has completed 3 ASW flushes on 3 submarines. Norfolk NSY is planning to flush main condensers on a carrier in January 2004. Submarines with chlorinators should drive submarine systems re-cleanings to zero.

LIST OF CHEMICALS NOW APPROVED FOR USE

Safe-T-Scale, Rydlyme, Dynamic Descaler, GOTAR D (Surface Ships and Non Nuclear Systems only) will appear on QPL on CID. HERC product "Pipe Klean®" is in process for approval. Passivation tests are being conducted.

STATUS OF Universal Industrial Process Instruction (UIPI) REVISION

The document is UIPI 5050-903 Rev A. It only authorizes the use of Safe-T-Scale and Rydlyme. There are a couple of refinements that need to be incorporated such as: new flush techniques for plugged tubes; flush authorization procedures; system approval letter in Appendix (interim); Commercial Item Description (CID); additional qualified products; and effects on steel components to name a few. The UIPI should cover the chemical products and systems approved for use on an interim basis. Ralph Wood, Rich Kurz and Paul Stirling will meet to determine best way to provide the information globally (i.e. Navy Ship Technical Manual (NSTM)).

Funding has been requested from NAVSEA 04X by PSNS for revision B, however it has not been received. LTJG Pentzien offered to contract Mr. Larry Dutton from NAVSEA 04X to help request \$16K to finish Rev B.

STATUS OF CID's

Preliminary CID is being revised to close some holes in the original revision. New passivation test parameters are being added. NAVSEA 08 has reviewed the preliminary and comments are being incorporated. This is expected to be completed by 30 August and will then have to be approved by NAVSEA 08 and NAVSEA 05. The UIPI will call out the CID. Also need to change the various chapters of NSTM in late FY04.

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STATUS OF TITANIUM/INCONEL STUDY

The study has been reviewed by NAVSEA 08 and comments provided to Rich Kurz. There are some GOTAR D questions. Several other issues need to be addressed including galvanic couples, non-metallic materials pitting, and titanium embrittlement at high temp (175° F) using hydrides. Funding has been budgeted and requested for FY-04. The issues are serious because the distiller units foul very quickly. Rich Kurz, John Wegand and Larry Silkaitis took an action to call Paul Robetor, Bechtel Plant Machinery Incorporated, on Friday at 1030 to obtain more information on status of research on Titanium cleaning efforts

PORTSMOUTH NAVAL SHIPYARD CONCERNS ABOUT THE WASTE TREATMETN OF SAFE-D-SCALE

This topic wasn't discussed since Mr. Dunn was not available.

CHEMICAL CLEANING WASTE TREATMENT TECHNICAL NEED

Mr. Zlateff provided a copy of the mini proposal for BAM 06 process. Mini Proposals are part of the Navy Pollution Abatement Ashore program Technical Needs Identification Process. The mini proposal is to DEM/VAL Ionic exchange technology as a method of treating the wastewater from this process. He recommended changing the lead activity to NAVSEA vice NFESC since the technology will be connected to NAVSEA flushing equipment. There are stand alone possibilities where NFESC could take the lead.. Treatment with Ozone should also be explored. Mr. Cartwright has also submitted a technology project for FY06 for Team Submarine. Mr. Zlateff and Mr. Stirling will rewrite the proposal. Mr. Cartwright will provide a copy of a proposal that he wrote. (Post meeting note: It was too late to change the mini-proposal. However, if this gets approved, the full proposal will be written to explore available technologies, and then DEM/VAL the best technology).

FUNDING NEEDS

See UIPI Rev B funding requirements in UIPI Section above.

OTHER NEW BUSINESS

Australian Navy reports corrosion problems with their equipment after cleaning. Need to send the UIPI to insure they are flushing the same way we are to avoid corrosion problems.

ACTION ITEMS

1. Mr. Rich Kurz to set up a visit for the January 2004 flushing at NNSY for himself and Mr. Larry Silkaitis.
2. a). LTJG Pentzien will contract Mr. Larry Dutton from NAVSEA 04X to help request \$16K to finish UIPI Rev B.
b). Mr. Paul Stirling to send a summary to LTJG Pentzien to assist with this effort. Post meeting note: Action was completed on 8/20/03
3. Action: Rich Kurz, John Wegand and Larry Silkaitis. Call Paul Robetor, Bechtel Plant Machinery Incorporated, on Friday at 1030 to obtain more information on status of research on Titanium cleaning efforts. Post meeting note: Action completed on 8/25/03.

ADJOURN

The next meeting is scheduled for 22 October 2003 at 1300 EDT at a location to be determined.

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* Attended or called in for the meeting