



# SSPC Standards and Training Initiatives for the Shipbuilding Industry

NSRP Meeting, February 25-26, 2010

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# Topics

- Update on SSPC Standards of interest to the Marine Industry
- Review of SSPC training available via e-learning courses (no travel required)

# Standards Projects Starting 2010

- Procedure for Determining Conformance to Steel Profile Requirements
- Criteria for Locating Test Sites for Measurement of Surface Contamination by Soluble Salts
- The Impact of Water Soluble Salt Contamination on Protective Coatings (report)
- Revision of SSPC-TU 11, Inspection of Fluorescing Coating Systems

# Procedure for Determining Conformance to Steel Profile Requirements

- Describes a process control procedure suitable for shop or field use for determining compliance with specified profile ranges on a steel substrate

# Procedure for Determining Conformance to Steel Profile Requirements

- Will include
  - > Instruments used (visual comparator, depth micrometer, replica tape, and ASTM D 4417 and portable stylus instrument ASTM D 7127)
  - > Procedures for verification of accuracy for each type of instrument, and
  - > Requirements for the number of measurements to be taken based on process control procedures

# Current Status

- Canvass for reviewers and first ballot completed
- Meeting held at PACE 2010 to review and discuss comments from first ballot
- Being prepared for second ballot



## Number and Location of Test Sites for Measurement of Surface Contamination by Soluble Salts

- SSPC is developing a soluble salts test protocol using an open ANSI approach
- Defines criteria for locating test sites when measuring the amount of soluble salt contamination on a steel surface with commercially available test kits



## Number and Location of Test Sites for Measurement of Surface Contamination by Soluble Salts

- Number of tests needed and their location
- Structures such as I-beam, vertical and horizontal tanks, and pipe sections

### Status:

- Preliminary draft distributed at PACE 2010 committee meeting
- Voting members on committee still being accepted

# Cooperation with NSRP Research

- NSRP has funded a project to level of salt mitigation as related to accuracy of measurement and cost benefits
- SSPC committee working on location and number of test measurement and the lead for the above project will share information of mutual interest



# Informational Report

## Effect of Soluble Salt Contamination on Protective Coatings

- Review basic chemistry and physics of soluble salts and how contamination may impact performance of protective coatings
- Extensive review of existing literature
- Not intended to provide recommendations for testing, permissible levels, or other guidance – objective information only

# Informational Report Status

- Preliminary draft distributed to review committee at PACE 2010
- Additional reviewers welcome
- Review and comment period to end March 31
- Committee will hold teleconference to discuss reviewer comments
- Objective is to issue report by February 2011



# Revision of SSPC-AB 1, Mineral and Slag Abrasives

- Definition of Type II expanded to allow use of by-product abrasives such as glass as long as they meet requirements of standard
- Qualification, Conformance, and Quality Control Test requirements are included
- Supplier must perform Qualification and Conformance tests and provide documentation unless otherwise specified
- Contractor must perform Quality Control Tests (oil and soluble contaminants) in field

# Revision of SSPC-AB 1, Mineral and Slag Abrasives

- Adds requirement that testing labs which initially evaluate the abrasive must be accredited to ISO 17025 by an ILAC or NACLA recognized accreditation body
- Includes an appendix that can be invoked for US Navy work containing additional requirements for radioactivity, friability, soluble and total heavy metal content
- Appendix not necessary for general industry use

# AB1 Revision Status

- Two drafts have been balloted to date
- SSPC working on resolution of negatives  
Draft #2
- Reballot expected in early April 2010
- Revision expected to be completed by June 30, 2010

# Standard for Encapsulated Abrasive (Sponge) Completed

- SSPC-AB 4 issued in October 2009
- Includes requirements for quality control of new and recycled media
- Cutting media must meet requirements of AB 1 or AB 3 or separate aluminum oxide requirements

# AB 4 Standard for Encapsulated Abrasive Media

- New media must meet requirements for dust emission
  - > Periodic testing of work mix for oil and salt contamination
  - > Tests to ensure classifier is working efficiency
- Standard Item 009-32 allows use of sponge-type media

# Revision of TU 11, Inspection of Fluorescent Coating Systems

- Revision will expand scope to allow use of additional types of inspection lights□with wider range of wavelengths
- Draft discussed at PACE 2010 committee meeting



# SSPC e-Learning Courses of Interest to the Marine Industry

- **NO TRAVEL NECESSARY!!**
- Register on-line
- Courses start each month
- Work at your own pace (within limits)
- Quizzes, exercises, exams are on-line



# SSPC e-Learning Topics of Interest to the Marine Industry

- Fundamentals of Protective Coatings (C-1)
- Applicator Training Basics
- Marine Coatings
- Basics of Steel Surface Preparation
- Basics of Nonferrous Surface Preparation

# Sample Page from Marine Course



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Classroom Library Glossary

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Marine Coatings

VIEW COURSE PROGRESS

- Introduction
- Attestation of Identity and Active Participation in SSPC E-Learning Courses
- E-Course Navigation Overview
- 1. Marine Basics
- 2. Marine Corrosion
- 3. Condition Assessment Workshop 1
- Quiz 1
- 4. Coatings
- 5. Antifoulings Workshop 2
- Quiz 2
- 6. Surface Preparation
- 7. Application
- 8. Coating Systems Workshop 3
- Quiz 3
- 9. Offshore Structures
- 10. Job Specification

You are here: [Classes](#) > [Marine Coatings](#) > Introduction

INCOMPLETE

## Introduction

This course covers the practical aspects of selecting, specifying, and using coatings to protect structures in harsh marine environment.

### Topics covered in this course:

- Marine Basics
- Marine Corrosion
- Condition Assessment
- Marine Coatings
- Antifoulings
- Surface Preparation
- Coating Application
- Coating Systems
- Offshore Structures
- Job Specifications
- Quality Management
- Inspection and Documentation
- Coating Failures
- Safety

### Structures covered in this course:

- Ocean vessels (blue/deep water)
- Inland vessels (coastal, brown water, shallow draft)
- Offshore structures
- Coastal marine structures

### Learning Outcomes:

At the end of this course, you will be able to:



# SSPC e-Learning Short Courses

- Designed to introduce student to techniques and terminology
- Start on 5<sup>th</sup> of every month throughout the year
- Time to complete: 5 hours over 20 weeks

# E-Learning Short Course Topics

- Basics of Steel Surface Preparation
- Basics of Non-Ferrous Surface Preparation
- Basics of Concrete Surface Preparation

# Sample Page from SP Short Course

## Testing

### Basics of Steel Surface Preparation

VIEW COURSE PROGRESS

- + Introduction
- + Attestation of Identity and Active Participation in SSPC E-Learning Courses
- + E-Course Navigation Overview
- + 1. Surface Preparation: A Three-Step Process
- 2. Evaluating Job Site Conditions
- + 3. Evaluating the Initial Condition of the Steel Surface
- + 4. Using SSPC VIS 1
- + 5. Recognizing and Repairing Surface Imperfections
- + 6. Recognizing and Removing Surface Contaminants

You are here: [Classes](#) > [Basics of Steel Surface Preparation](#) > 2. Evaluating Job Site Conditions

COMPLETED

## 2. Evaluating Job Site Conditions

### REVIEW

Before surface preparation begins, it is necessary to check that the **relative humidity**, the percentage of water in the air at a given time, and **dew point**, the temperature when air becomes saturated with water (100% humidity), are within the proper range.

- Under normal mild atmospheric conditions it is best to paint a surface as soon as possible within 24 hours after surface preparation concludes. Under no circumstances should blast-cleaned steel be permitted to **rust back** before painting, regardless of the time elapsed. With wet abrasive blast cleaning or waterjetting, a certain level of flash rusting may be acceptable. If visible rust occurs prior to painting, surfaces must be re-cleaned to meet contract cleaning requirements. It is up to the contractor to verify the success of surface preparation through recognized quality control tests and document the quality of the cleaned surface before proceeding with application of the primer even if third-party inspection is required.

SSPC surface preparation standards recommend that blasted steel surface be no less than 5°F (3°C) below the dew point and rising.



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# For Additional Info

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Questions?