



SSPC-PA2 Challenge

Workbook



1.

Following are examples of three structures. Based on the square footage of the coated area and the requirements of SSPC-PA 2 calculate the number of areas, spot measurements and minimum number of gage readings that must be acquired for each coated area and structure.

Tank

Coated Area: 6,750 square feet

No. of 100 square foot areas: _____

No. of Spot Measurements: _____

No. of Gage Readings: _____



Bridge

Coated Area: 950 square feet

No. of 100 square foot areas: _____

No. of Spot Measurements: _____

No. of Gage Readings: _____



Ship

Coated Area: 300 square feet

No. of 100 square foot areas: _____

No. of Spot Measurements: _____

No. of Gage Readings: _____



2.

The following coating thickness data was acquired from a 100 square foot area. The specification requires a 4-6 mils DFT. SSPC-PA 2 has been invoked. Complete the table below for each of the Coating Thickness Restriction Levels in Section 9 of SSPC-PA 2.

Spot 1: 4.1, 5.1, 5.4 mils
Spot 2: 4.2, 5.5, 4.0 mils
Spot 3: 4.0, 3.0, 3.3 mils
Spot 4: 6.5, 7.3, 6.9 mils
Spot 5: 3.5, 4.6, 4.1 mils

Restriction Level	1	2	3	4	5
Does each of the gage readings conform?					
Does each of the spot measurements conform?					
Does the area conform?					
What is the allowable tolerance of the spot measurements?					



3.

Following are the DFT specification requirements for a 3-coat system.
Calculate the spot measurements and area measurement
requirements based on Coating Thickness Restriction Levels 1-

Specification: Primer (P): 3-5 mils
 Midcoat (M): 6-8 mils
 Finish coat (F): 2-3 mils

Restriction Level	1	2	3	4	5
P: Allowable Spot Measurement (range)					
P: Allowable Area Measurement (range)					
M: Allowable Spot Measurement (range)					
M: Allowable Area Measurement (range)					
F: Allowable Spot Measurement (range)					
F: Allowable Area Measurement (range)					



4.

Below is an illustration of a nonconforming area with 8 directional arrows. Enter the distance between the non-conforming area and the additional spot readings. Based on the spot measurements obtained (by radiating outward in 8 directions), indicate whether additional spot measurements are necessary. The specification invokes SSPC-PA2 and requires 8-10 mils DFT.

Additional Spot Measurements Required (circle)?

YES

NO

Which directions (circle)?

1

2

3

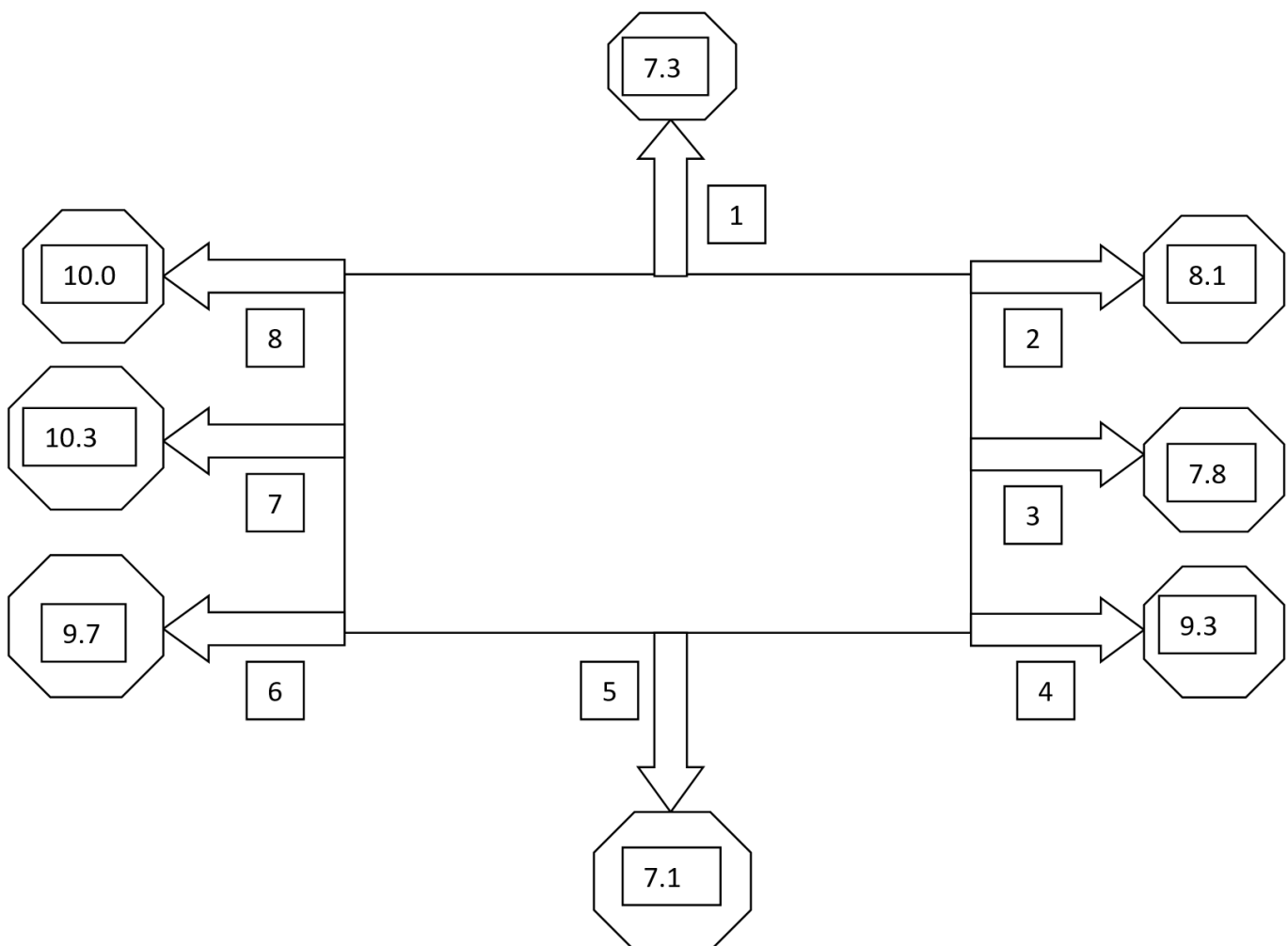
4

5

6

7

8



5. Verifying the Accuracy and Use of a Type 2 (Electronic) Gage

A coating specification required a 1,000 sq ft area of abrasive blast cleaned steel to be coated at a dry film thickness range of 9.0 to 11.0 mils per SSPC-PA 2 at Coating Thickness Restriction Level 4. An available 5.2 mil measured plastic shim was used on the blasted steel surface to adjust the gage (after verification of accuracy was performed on Certified Standards). The gage was then used to measure the coating thicknesses at five locations per SSPC-PA 2.

5A. Was it necessary to obtain a Base Metal Reading?

5B. What is the minimum number of gage readings that are required by SSPC-PA2 to obtain a spot measurement with a Type 2 gage?

5C. What is the number of spot measurements required by SSPC-PA2 in the 1,000 sq ft area?

5D. What is the tolerance of the spot measurements?

5E. What is the tolerance of the area measurement?



6. Read each of the five statements below and indicate whether the statement relates to Calibration (C); Verification of Accuracy (V); or Adjustment (A)

6A. The Type 2 gage was shipped to an accredited laboratory after 2 years of service.

6B. The Type 1 gage was checked on certified coated standards prior to use.

6C. The Type 2 gage was checked using certified shims placed on a smooth aluminum surface prior to use. _____

6D. The Type 2 gage was checked on certified shims placed on an abrasive blast cleaned steel surface prior to use. _____

6E. The Type 2 gage was checked on measured shims placed on an abrasive blast cleaned steel surface prior to use. _____



7. Determine whether the coating thickness gage is within tolerance based on the following information.

Gage Manufacturer's stated accuracy: 5%

Tolerance of Certified Coated Standards: 2%

Coated Standard Value: 5.8 mils

Gage reading on Certified Coated Standards: 6.4 mils

8. Describe the difference between performing a single-point and a two-point verification of accuracy.

9. **True or False:** When obtaining a Spot Measurement with a Type 2 Gage set-up in the scanning/continuous read mode, the gage operator can move the probe in a circular motion to obtain a minimum of 3 gage readings in a 1.5-inch diameter area.

10. **True or False:** SSPC-PA 2 contains eleven appendices that are all considered a mandatory part of the Standard.

