
CT-005 SUPPLEMENTAL READING

New Coating Inspectors: Practical Field Guidance

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Field wisdom on QA versus QC, specifications, documentation habits, tools and calibration, working with a crew, final inspection, and holiday testing. Companion reading for CT-005 and the Field Safety for Coating Inspectors set on the Coatings track.

FIELD NOTES FROM RCS
~8 MIN READ

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New coating inspectors

This is a general guide for new coating inspectors. It's not a technical paper, and it's definitely not the only way of doing things. These are some of the tools and personal habits I have gained over the years that work for me.



1) Start with clarity: role, spec, and your point of contact

Before you step on site, get clear on what you're responsible for and who you answer to. QA vs QC can look the same in the field, but expectations and authority are not the same.

Quick rule of thumb: QA is usually hired by the project owner and is responsible for verifying that the QC and crew are following the required procedures.

QA typically has the authority to accept work as meeting the spec, and when something needs to change, they either have the authority to allow it or direct access to the person who does. QA does not direct the work or tell the contractor's crew what to do day-to-day.

QC is hired by the contractor and handles most of the hands-on inspection: taking readings, documenting results, and helping keep the crew aligned with the spec. QC can direct work within the contractor's scope (for example, stopping the process until a hold point is met or a deficiency is corrected).

We have [another article that goes deeper into the QA/QC roles](#) if you want the full breakdown.

When you get on site, figure out who you go to for clarification when you have an issue or question, either the lead inspector or the project engineer is the best bet depending on your role. Make sure you have the current spec, know what you're expected to document, and understand the hold points you're supposed to witness.

2) Build documentation habits that save you later

Paperwork looks a little different on every job. Some want paper, some want everything done on an iPad, some want both. Electronic forms are great, but I still recommend keeping your own field notes. They're your safety net.

I still carry a Sokkia level field book (8152-50) for all of my field notes. [Here's a link if you're interested](#). There are many others out there depending on your personal preferences. I like this one because it fits in your back pocket and can stand up to abuse in the field.

At the end of the shift, I use those notes to complete the official documentation. That rhythm keeps you consistent, and it keeps you from relying on memory after a long day.

I also back up gauge readings with DeFelsko PosiSoft whenever I can. Early in my career I was on a job where the coating inspection forms got turned in at the end and somehow went missing. Back then everything was handwritten and there were no electronic backups. I had copies of most forms, and the rest could be rebuilt from my field book. That one lesson paid for a lot of notebooks.

One caution: *make sure personal notes are allowed. In some rare cases clients require turning in all field books and project-related materials at the end of the job.*

3) Tools and calibration: be ready either way

Make sure you keep all of your coating inspection equipment calibration up to date. Some clients provide equipment, but it's a lot easier to stay consistent when you know your tools and your settings.

Keep calibration documentation easy to produce on request. I keep an electronic copy on my phone and paper copies in the truck. If you use DeFelsko equipment and have it calibrated by them all documentation is accessible online through their Positrack website.

4) Working with a crew: trust, but verify

One of the quickest ways new inspectors get burned is taking someone's word that a step was done correctly. I've worked with excellent crews, but even a good crew can miss a step when they're tired, rushed, or think nobody is looking.

All it takes is one miss and the whole system can get compromised: skipping an air check on a compressor, improper mixing, ambient conditions out of spec, or a missed recoat window. Those are hold points for a reason.

Be present for the key steps before the crew moves on. If something is out of spec, document it and report it. Remember that our job is to make sure the job is done correctly, not to make friends.

5) Final inspection: let the spec drive the readings, not the form

Final inspection should match the spec you were given, not the number of blanks on a form. On larger projects (tanks, bridges, structural steel), you'll often see SSPC-PA2 called out. I'm including a quick pocket card download at the bottom for fast reference.

I've seen forms that only give a fixed number of spaces for readings in a section. Don't let that drive your plan. If PA2 (or another method) isn't specifically called out, let the spec, the risk, and what you're seeing in the coating drive how many readings you take and where you take them.

Example: if PA2 isn't required and I'm inspecting a long run of pipe, I'll use a PosiTector 6000 in scan mode and scan long runs at 12, 3, 6, and 9 o'clock. If you're using the

PosiSoft app, it will store the individual readings and the average. That approach helps you spot thin areas and weird patterns faster than taking a handful of random spots. Use what fits the job, but don't short-change the coverage.

6) Holiday testing: last hold point, no shortcuts

When holiday testing is required, it's usually the last hold point and one of the most important. Whether you're using low or high voltage, follow the specification or the manufacturer guidance. If there's a conflict, default to the stricter requirement and get clarification from your technical contact.

If SP0188 is called out, make sure you're working from the newest revision. I'm including a download with the SP0188 (2024) voltage selection chart/table so you can reference it quickly in the field. Any failures need to be documented, repaired, and rechecked in line with the specification. Many newer holiday detectors will automatically set the voltage once you enter the coating thickness and select the specification.

Closing thought

The best advice I can give is simple: learn the spec and the project before you ever step foot on site. Know who your contact is, what your authority is, and which hold points you're responsible for witnessing.

Ask questions early. Speak up when something doesn't look right. Your job isn't to keep production moving. Your job is to help make sure the work that gets buried (or put into service) is work everyone can stand behind.

If you build solid habits now, you'll be calm when things get loud. And when the paperwork matters most, you'll have what you need.

APPENDIX A — FIELD REFERENCE

SSPC-PA 2 Pocket Card

Sampling and number of readings — fast reference for dry-film thickness inspection per SSPC-PA 2.

Measurement structure

- **Gage Reading** — 1 instrument pull
- **Spot Measurement** — average of 3 readings
- **Area Measurement** — 5 spots per 100 sq ft
- **Minimum per area** — 15 gage readings

Sampling by coated area

- **< 300 sq ft** — every 100 sq ft area measured
- **300 – 1,000 sq ft** — 3 areas measured
- **> 1,000 sq ft** — 3 areas in the first 1,000 sq ft, +1 area for each additional 1,000 sq ft

Reading totals

- **1 Area** = 5 spots
- **1 Spot** = 3 readings
- **1 Area** = 15 readings minimum

Examples

- 100 sq ft → 15 readings
- 300 sq ft → 45 readings
- 1,000 sq ft → 45 readings
- 2,000 sq ft → 60 readings
- 5,000 sq ft → 105 readings

APPENDIX B – FIELD REFERENCE

SP0188 (2024) Voltage Setting Guide

Quick reference for holiday detector voltage selection using Table A1 values (10–100 mils).

How to use

- Determine coating thickness (DFT) in mils.
- If you have a range, average the low and high.
- Use the nearest 2-mil value below to select the recommended kV.
- Set your instrument to the kV shown (volts shown for convenience).

Example: Average DFT = 36 mils → Recommended setting = 7.8 kV ($\approx$ 7,800 V).

DFT (mils)	kV	Volts
10	3.6	3,600
12	4.0	4,000
14	4.4	4,400
16	4.8	4,800
18	5.2	5,200
20	5.5	5,500
22	5.9	5,900
24	6.3	6,300
26	6.6	6,600
28	7.0	7,000
30	7.3	7,300
32	7.6	7,600
34	7.8	7,800

DFT (mils)	kV	Volts
56	8.9	8,900
58	9.0	9,000
60	9.0	9,000
62	9.0	9,000
64	9.1	9,100
66	9.1	9,100
68	9.2	9,200
70	9.2	9,200
72	9.2	9,200
74	9.3	9,300
76	9.3	9,300
78	9.4	9,400
80	9.4	9,400

DFT (mils)	kV	Volts
36	7.8	7,800
38	7.9	7,900
40	7.9	7,900
42	8.6	8,600
44	8.7	8,700
46	8.7	8,700
48	8.8	8,800
50	8.8	8,800
52	8.8	8,800
54	8.9	8,900

DFT (mils)	kV	Volts
82	9.4	9,400
84	9.5	9,500
86	9.5	9,500
88	9.6	9,600
90	9.6	9,600
92	9.6	9,600
94	9.7	9,700
96	9.7	9,700
98	9.8	9,800
100	9.8	9,800

Note: Values shown are taken directly from the referenced table for quick field use. Always follow the project specification and manufacturer guidance.

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