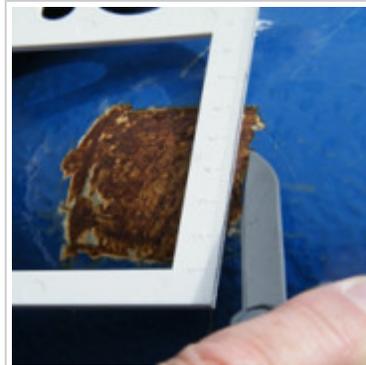
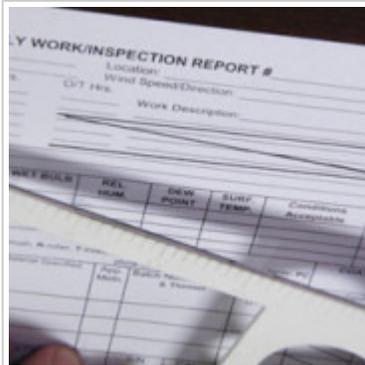
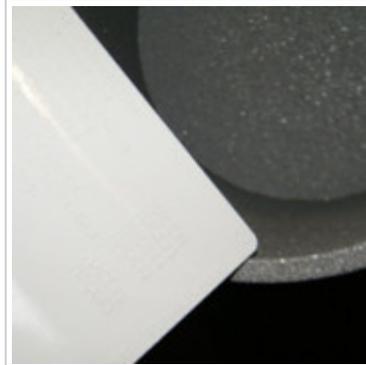
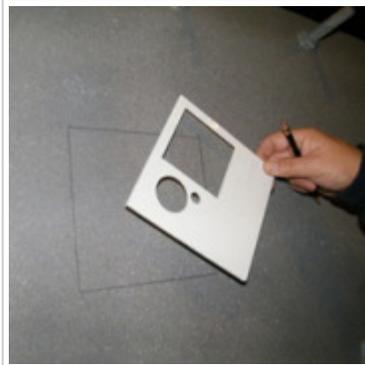
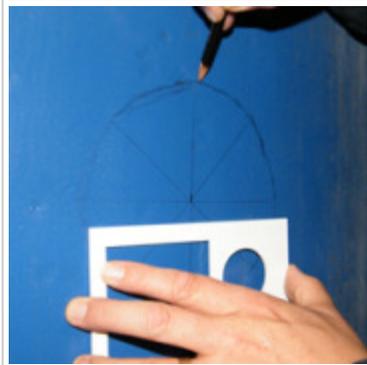
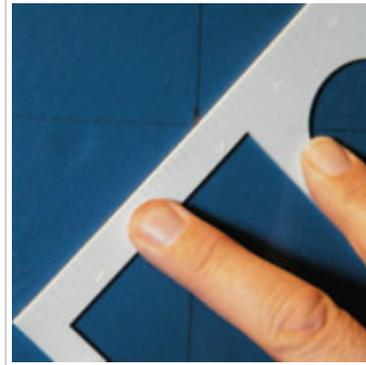
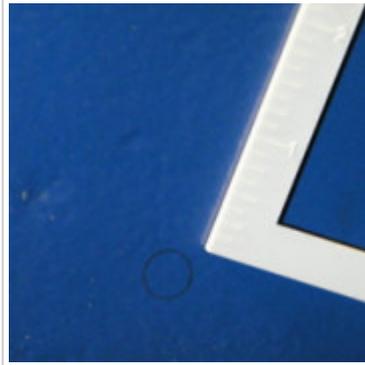
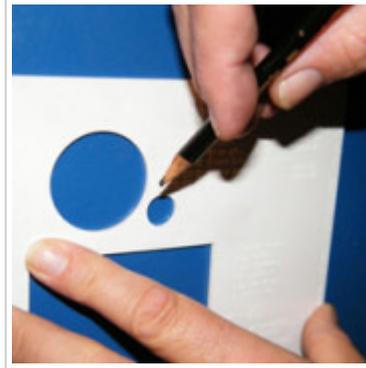
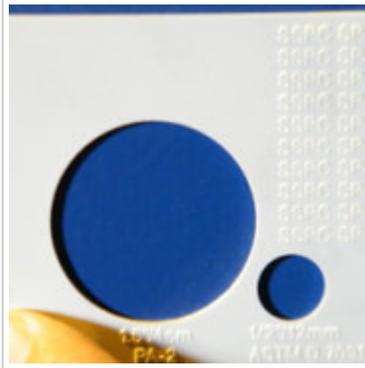
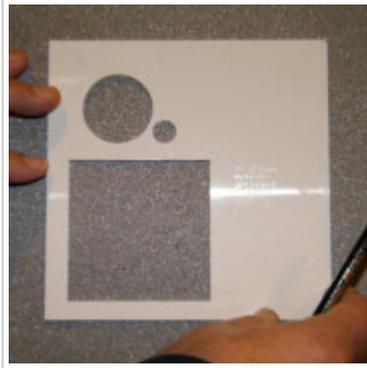


Coating Inspector Gage® By Job Safety Associates, LLC.



Instructions for the Coating Inspector Gage®

These instructions have been written to show you how to use the Coating Inspector Gage® to make use of the standards quicker and easier.

Abrasive Blasting Cleanliness

First, let's look at the cut outs in the Coating Inspector Gage®. The largest cut out, measuring 3" X 3" (76mm X 76mm), is the abrasive blasting inspection window. Joint NACE & SSPC dry abrasive blasting standards refer to an area that an Inspector must observe for the acceptable amount of staining or shadowing. For example, NACE 2/SSPC SP-10 calls for a blast that has no more than 5% staining. The 5% percent is calculated as 5% of the 3" X 3" (76mm X 76mm) square. Thus, any 3" X 3" (76mm by 76mm) area may contain no more than 5% staining or shadowing. The Inspector can also use the observation window in conjunction with other surface preparation standards to aid in focusing the Inspector even though no specific unit area may be required.

Dry Film Thickness (DFT)

The large 1½"(4cm) circle (observation portal) is used to guide the Inspector in taking Dry Film Thickness (DFT) readings on ferrous substrates, such as steel. SSPC PA-2 requires that a pattern of readings be used based upon the size of the structure being painted. The base measure used in this standard is 100 ft² (about 10m²). Within this area, five 1½"(4cm) spots are selected by the Inspector and within each spot 3 readings must be taken. See PA-2 for specific instructions on how to average the readings and exclude readings.

The ½"(12mm) observation portal has been provided on the Coating Inspector Gage® for ASTM D 7091. ASTM D 7091 also requires the Inspector to identify 5 spots, but these spots must be a ½"(12mm) circle. Again, 3 readings are taken within this smaller observation portal. Because of the smaller size of each spot required by ASTM D 7091 an Inspector may faintly mark a circle with chalk, stone or other method allowed by the specification and use the smaller observation portal of the Coating Inspector Gage® as a guide.

The Coating Inspector Gage® portals can be used for measuring DFT on other substrates as well. Measuring DFT with Eddy Current type gages often calls for the use of ASTM D 7091. Some specifications may refer to the same frequency as PA-2. The observation portals work for this type of gage in the same way they work for Type I and Type II gages. SSPC PA-9 and ASTM D 6132 address the use of ultra-sonic gages. In PA-9, similar areas are used with the same number of spots and individual readings within the spots as PA-2, but the spots are 6" (15cm) in diameter.

Along one edge of the Coating Inspector Gage® is a 6" ruler on one face and on the reverse face is a 15 cm ruler. This ruler will give you a visual reference for your PA-9 spot. If you need to mark it on the surface for better viewing, simply use a chalk, stone or other method allowed by the specification and draw a 6" or 15cm line noting the 3" (7½ cm) measure. Draw another line with the Coating Inspector Gage® bisecting the first line. You now have a cross or X pattern to guide you. You can form the circle to any level of accuracy you desire by continuing to bisect each segment, at the 3 inch (15 cm) mark, created by the preceding line. By taking your three readings in the center of every other section of the drawn circle, you can comply with the requirement of at least 2 inches between readings in PA-9.

You can use the Coating Inspector Gage® for virtually any standard to visually guide you in your DFT measurements. Even ISO standards, which often refer only to an agreement between the parties as to spot size and number of readings is easier. During the discussions with the parties to determine to spot size and number of readings, the Coating Inspector Gage® becomes a visual reference for all the parties to discuss. Comparing the relative sizes of the observation portals and the rulers allows for all to visualize how measurements may be taken and aid in reaching a consensus.

Soluble Salt Tests

Most soluble salt tests come prepackaged these days. However, one test does not. One of the older tests, SSPC TG-15, is favored because it can be done with materials readily available in most locations and is inexpensive to conduct. SSPC TG-15, Method B1 Swabbing or Washing Method test, also sometimes called the Cotton Ball Test, is an extraction method which uses distilled water on clean cotton balls and the surface is swabbed with the wet cotton balls. The collected water may be analyzed by virtually any method. The first step in this extraction method calls for a 6" X 6" (15cm X 15cm) square to be drawn on the surface with chalk, stone or other method allowed by the specification.

The Coating Inspector Gage® has a built in ruler of 6" on one face and 15cm on the other face. You will see that 2 corners of the Coating Inspector Gage® are sharp right angles and 2 corners are rounded on measured radii. Draw 2 lines of the square with the sides and corners on the right angle. Next, flip or invert the Coating Inspector Gage®, lining up the previous lines on the sides with rounded corner and complete the square on the inverted corner. You now have a nice square instead of a disjointed attempt that often happens with a straight ruler.

Sharp Edges

Sharp edges mean certain early failure to most coatings. This is why we often see NACE SP 0178 in specifications. While this standard was intended for submersion service conditions, its companion comparator is often required for any sharp edge issue. The Coating Inspector Gage® is not intended to replace the SP 0178 comparator; there is no replacement, especially where it is specified. The Coating Inspector Gage® has the 2 round corners at a similar radius of 1/8 " and ¼ " respectively. These rounded corners can be used to find edges that the inspector would then measure against the SP 0178 standard, thus saving time. Of course, these corners are an aid to visual inspection where a radius has been specified, but not SP 0178.

Conversions and Misc

Conversions of some basic measures, formulas for dry film and wet film calculations are provided as references. Even the formulas in Imperial and Metric for estimating paint are included. Working in extreme areas was another reason for the Coating Inspection Gage®.

In the field, we need to be able to carry what we need. We don't want to walk back and forth because we forgot something. The simple things are the things we tend to forget. The inside edges of the observation window make drawing boxes easy. The straight edges for drawings lines, making charts for data entry and cross-outs of errors on our documentation make the job easier. The Coating Inspector Gage® is easy to carry, fit into a file folder, on a clipboard or kept in a 3-ring binder. Don't forget to place the Coating Inspector Gage® in your photos to give scale to document conditions. I am sure you will find a plethora of other uses for the Coating Inspection Gage®.