

PRODUCT ANNOUNCEMENT

Craig Wallbank | Technical and Training Center Manager | Winoa USA Inc.

WA Clean: The Surface Cleanliness Measurement Tool

THE WA CLEAN is a patented design by Winoa Group (W Abrasives) created to provide objective, reliable and repeatable surface cleanliness results based on mathematical values. It is small, portable and user friendly.

The device requires no ambient light and can be used in total darkness, making it ideal for confined spaces where light is limited or nonexistent. Using the WA Clean, any operative can provide an accurate and quantitate measurement. The key factor is the electronic optical method designed to evaluate the surface cleanliness after abrasive blast cleaning. The WA Clean is not meant to replace SSPC-Vis 1 reference photographs (ISO8501-1) but was designed to work in conjunction with industry references.

Main Features and Benefits

- Easy-to-use handheld device—7.8 inch x 4.7 inch (20 cm x 12 cm) in size and weighs only 1/2 lb (300 g)
- Quick measurements: Less than two seconds per analysis
- Can be used in total darkness
- Potential to reduce re-blasting and over-blasting
- Magnetic skirt fits on curved surfaces such as pipes and windmills towers (can be purchased without the magnetic skirt when avoidance of the transfer of contamination, soluble salts, or chlorides is necessary)
- Cleanliness measurement or PASS/FAIL working modes
- Easy-to-use interface—downloads to spreadsheets
- PC transfer via USB and no software to install
- Internal storage is able to record up to 20 different references for multiple substrates

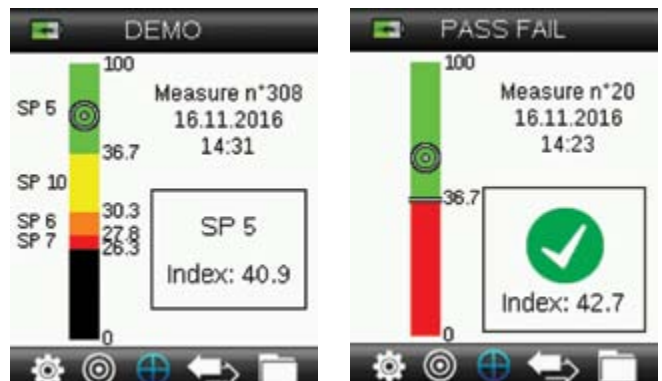
How It Works

An array of color is beamed to the surface of the substrate. As the incident beam hits the surface, certain spectrums of color are absorbed and at the same time reflected off the surface. It is this reflected light that is measured by the “eye” of the device and converted to a unique cleanliness level index from 0 to 100.

Using these index figures, we now tell the machine what it is looking at using standard industry SSPC VIS 1 (ISO 8501-1) reference photographs. For example, if we know the surface to be SP10/NACE2 (Sa2.5) the index value is 65, the minimum value for that degree of cleanliness has been achieved. As we approach SP5 (Sa3), the index will be higher, say 80. Using these two values, the 65 is the minimum value for SP10 (Sa2.5) and the 80 is the maximum value before we transfer the surface to an SP5 (Sa3). As with the visual reference photographs, prior to any measurement, we also need to tell the WA Clean the starting rust grade, A/B/C/D.



WA Clean is 7.8" x 4.7" (20 cm x 12 cm) in size and weighs only .5 lb (300 g). It can be used with or without a magnetic skirt.



The WA Clean has two working modes: Cleanliness measurement (left) or PASS/FAIL (right).



The working principle of WA Clean is color spectrometry. The coordinates obtained are converted to a unique cleanliness level index from 0 to 100.

How do we do this? Again, using the industry standard reference photographs, we can consider that the rust grade is X. Taking a selected number of measurements we can find the average surface rust coloration to have an index of 10, for example. For any value below this figure, the device will read “NB” (non-blasted). For a more accurate measurement, the WA Clean indexes can be set to any of the levels of current cleanliness grade: SP7 / SP6 / SP10 / SP5 (Sa1 / Sa2 / Sa2.5 / Sa3). NACE 1/2/3/4 can also be used.

Not only can we use the cleanliness values interface, the device can be used in PASS / FAIL mode. Again, for example, if our minimum specification calls for a surface to be no lower than SP10, we can calibrate the WA Clean to that required index. Should the reading be lower than the given value it will tell us the part is in FAIL. The discretion of the user or quality department can then determine if the substrate is subject to additional blasting.

Field Tested and Approved

The WA Clean was developed through the time and involvement of pilot customers—mainly pipe coating facilities. A large Russian manufacturer and coater of steel pipe for the gas industry using FBE (Fusion Bonded Epoxy) tested the WA Clean and wrote the following in their Quality Control procedures:

- “Very happy with the tool, find it very useful, especially at night time or when not enough light.”
- “All people very happy with it, even the head of the shop wants to help with certification.”
- “We managed to solve disagreement with inspectors thanks to WA Clean.”

For more information on the WA Clean in North America, please contact: Craig Wallbank at Office Phone: (936) 253 5301, Cell phone: (281) 853-5463, Email: craig.wallbank@wabrasives.com or Charlie Gorman at Office Phone: (936) 253-5302, Cell Phone: (915) 526-5180, Email: charlie.gorman@wabrasives.com.

In Europe and Asia, visit wabrasives.com for contact information. ●



The WA Clean is ideal for pipe coating, rail and steel plate.

The 13th International Conference on Shot Peening

Hotel Delta Montreal
475, President-Kennedy Avenue
Montreal, H3A 1J7 Canada
September 18-21, 2017

Aims and Scope

The purpose of this conference is to foster exchanges between academic and industrial scientists on processes inducing beneficial residual stresses, as well as their effects, with an emphasis on traditional shot peening. While this is not an exhaustive list, processes like deep rolling, laser peening, ultrasonic peening, cavitation peening, flapper peening and needle peening fit within the conference’s scope. In addition, fundamental or applied aspects, modeling, experimental methods, fatigue life, forming and industrial applications will be addressed.



Prof. Martin Lévesque
Conference Chairperson

Keynote Speakers

- Dr. Nihad Ben Salah, Safran Research Center
- Professor Yukui Gao, Tongji University
- Professor Michael Hill, University of California
- Mario Guagliano, Politecnico di Milano

Presentations

The organizing committee anticipates at least 75 high quality talks (18 minutes + 7 minutes question and answer period). Poster sessions might also be arranged based on the number of proposal and the available time slots.

Proceedings

The conference papers will be compiled into a proceedings booklet.

Student Presentation Awards

Students (undergraduate, graduate and post-doctoral fellows) are encouraged to present their works at the conference. A jury will evaluate oral presentations made by students and will distribute three “best presentation awards” during the banquet.

Exhibition

An exhibition of commercial products related to the conference topics will held parallel to the conference.

Registration

Early registration begins May 30, 2017.

Additional Information

Website: www.polymtl.ca/icsp13/en

Conference Chairman: Professor Martin Lévesque at martin.levesque@polymtl.ca