

# TAM Panel



TAM Panel offers a swift and efficient approach to evaluating the ongoing functionality of liquid penetrant inspection systems. It supports various types of penetrants including fluorescent, water wash and non-water wash, hydrophilic and lipophilic, as well as visible ones.

TAM panels serve as the most practical solution for meeting the requirement outlined in MIL-STD-6866 paragraph 5.8.3 for a daily system performance check. There are two versions of the panels available: one with a chrome plated section polished to a mirror-like finish, and the other with the chrome section lightly grit blasted to dull the mirror finish. We manufacture both types: grit and polished.

#### Salient Features:

- Penetrant Testing and Monitoring Panels (Polished or Grit)
- Polished TAM Panels feature Chrome Polish on the left side and Grit Blasted on the right.
- Grit TAM Panels are Grit Blasted on both the left and right sides.
- Grit and Polished panels are crafted from a 4×6 Stainless Steel Plate with 5 indications ranging from largest to smallest.

#### General Practices:

- TAM panels monitor penetrant systems for changes in materials or hardware performance at the beginning of each work shift.
- Conduct system tests before inspecting production parts to ensure the penetrant system is functioning correctly.
- Use TAM Test Panels in pairs, designating one as the “working panel” and the other as the “control” panel for comparative analysis.
- Adhere to production procedures, ensuring minimum penetrant dwell times and maximum wash times are followed for accurate results.
- Record results from the tests performed on the panels to track any changes or deviations in the penetrant system.
- Ensure that the panels are clean and dry before and after use to prevent any contamination or interference with the test results.
- Handle the panels carefully during processing to prevent any physical damage that could affect the accuracy of the tests.

#### Specifications Compliance:

- MIL-STD-6866 paragraph 5.8.3

#### Processing:

Submerge the panel in the penetrant tank, ensuring it is immersed up to or just below the hinge for easier rinsing and cleaning. Allow the panel to dwell in the penetrant, then position the handle at a 45-degree angle to create a stand. If necessary, transfer the panel to the emulsifier tank, let it dwell, and then rinse it. Rinse the panel while it is in the stand position. After a thorough rinsing, either dry the panel in a processing dryer in the stand position or hang it by its handle on a ledge until completely dry. Examine the fully dried test panel under a black light, and make a record of your observations.

**Useful Tips:**

- A Level II sensitivity penetrant should locate two to three or the C, D & E crack indications. Level III sensitivity penetrants are now capable of finding four sometimes all five crack indications (A,B,C,D&E) on the test panel.
- Handle the TAM Test Panel with reasonable care to avoid scratches. Clean each test panel immediately after use.
- Use a separate set of TAM test panels for each penetrant system. Do not use different penetrant sensitivity levels on the same set panels.
- TAM Test Panels should be checked periodically against each other using unused penetrant materials.
- It's also beneficial to compare periodically the working panel processed with material from the production line against the control panel processed with new materials from the laboratory.

**Maintenance:**

- Clean the TAM panel after each test to prevent clogging. Soak it in solvent for at least four hours. For optimal results, use ultrasonic cleaning or follow the provided instructions for washing.
- Before conducting any test, ensure that the panel is completely dry to avoid any interference with the test results.
- If clogging occurs, spray the panel with nonaqueous developer and heat it in an oven to draw out penetrant residue.
- All TAM panels should be recalibrated periodically. It is recommended to recalibrate and recertify each panel annually to meet Pratt & Whitney specifications.
- TAM panels can be returned to your distributor, who will send them to the facility for complete cleaning, crack measurement, and recertification. If the panel meets specifications, it will be recertified and returned with a certificate of conformance.

**Note:** The five induced cracks will become naturally larger from temperature recycling and ordinary use due to the thin chrome plating in manufacturing TAM Test Panels. The grit blasted section may become smooth from wiping and handling.