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Fluorescent Penetrant Inspection

NDT penetrant testing includes fluorescent dye penetrant, which is typically green and uses a white developer to draw the dye back to the surface from inside the discontinuities by 'wicking' or capillary action. The fluorescent penetrant is characterised by its ability to emit visible radiation when excited by UV-A light and may be used on a variety of materials. Fluorescent penetrant is typically more sensitive than visible dye and is ranked into 4 levels of sensitivity. It does, however, require special lighting conditions: NDT penetrant technicians must have UV-A lamps, blackout shades and power generators in the field. Fluorescent-dye testing is easily performed under laboratory conditions.

THE Applus+ SOLUTION

Applus+ has a complete portfolio of NDT penetrant testing services, and fluorescent penetrant testing offers a quick and effective test method for locating small surface connected discontinuities in applications. Applus+ only uses penetrant supplies from reputable manufacturers who ensure their products meet code requirements. Our NDT technicians are trained in accordance with a written practice that complies with ASNT-SNT-TC-1A. Applus+ has qualified technicians and staff available to meet its clients' needs as challenges arise.

Target customers

Applus+ can deliver fluorescent dye penetrant inspection in many industries such as oil exploration/production and refining, automotive and maritime, among others.

NDT fluorescent penetrant is heavily utilised in the aerospace industry and other industries that require a higher level of sensitivity than can be achieved using visible dye. Dye penetrant tests may be used on a variety of non-porous materials including

forgings, castings, ferrous and non-ferrous metals including aluminium and magnesium, ceramics, glass and some plastics. Many formulations comply with low sulphur and low halogen requirements and some have high flash points, high stability, non-volatile states and low toxicity.