

1.6.6. NEW EQUIPMENT FOR MOBILE PENETRANT TESTING

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Fluorescent Penetrant Testing (PT) is one of the most sensitive Non Destructive Testing (NDT) methods for detection of surface defects with a width up to 0,2 μm . This method is being also widely applied for leak testing, its sensitivity comes to $2 \times 10^{-7} \text{ m}^3\text{Pa/s}$. The method application requires often some mobile techniques, both for inspection and for documentation. The subject of this paper is the application of high sensitive fluorescent penetrant systems (cleaner, penetrant, developer), mobile ultraviolet radiation sources, test blocks and special portable microscope camera with adjustable built-in UV LED light for precise, fast and traceable documentation in the field. This equipment use allows to perform prompt and reliable surface inspection, to discover and identify microscopic details that need attention and to transmit high definition images with observations, comments and measurements.