

CERAMAH TEKNIK TECHNICAL TALK

Infrared thermography: Introductory and possible research application

Dr. Fathoni Usman

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This presentation will deliver the introductory of infrared thermography (IRT) imagery. The IRT is a branch of remote sensing measuring radiant temperature of object's surface. The application of infrared thermography has become part of non-destructive test and evaluation (NDT&E) in industry and its application apparently increase for various small to large scale objects. The measurement of apparent surface radiant temperature gave information on temperature anomalies and condition beneath the investigated object or site. The IRT is not a magical tool which instantly gives result. There are parameters affecting the measurement i.e. emissivity and reflected temperature. On site investigation, the diurnal cycle and angle of view play other roles in the process to get reliable data. Selection of IRT camera will become important for specific investigation tasks. The temperature range, thermal sensitivity and resolution are critical parameters in selecting the thermography camera. In this presentation application of the IRT for NDT&E of shotcrete tunnel lining and other study on rock failure, ground water seepage and slope failure characterization will be presented.