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DEVELOPMENT OF ACTIVE THERMOGRAPHY FOR NDT APPLICATIONS THROUGH STANDARDISATION

Many laboratories have been working about Active Thermography as a Non Destructive Testing method for many years. This method can be applied on metallic or composites materials for surface or subsurface defects. Thus, many different configurations can be encountered to measure the heat distribution and generate heat flow into the part. Signal processing is also widely used to improve the performance of detection.

After encouraging results, aerospace, automotive and energy industries are now involved into industrialization of the technology to apply it for production or maintenance applications. Good practices and common wording are often required by end-user to qualify the process.

Since the beginning of the 2000s, a working group was founded within CEN/TC138 'Non-destructive Testing' to define standards in thermography, in the European Committee for Standardization (CEN). Some other actors have also produced standards (ISO, IEC, ASTM...).

This paper aims to list the standards currently available about thermography and the associated vocabulary. It describes the generic terms to be used in active and passive thermography (operating modes, reference blocks, reporting…) and also more specific elements about laser and induction thermography for example.

It will also put in perspective the further works to be done in the next few years to take into account the new trends in active thermography and how to qualify for industrial applications.