

bcbResearch®

Thermographic solution for thermal image processing

bcbResearch[®] software is a powerful tool for infrared thermography inspections that enables the users to carry out the following tasks: online and offline measures analysis, camera configuration and control, thermal sequence processing for <u>active and passive thermography inspections</u>, works with a large range of **FLIR** cameras (cooled & uncooled ones wih Genicam), automated analysis and correction of thermographic images, automated and manual transfer of camera parameters, real-time visualization and filtering, alarms programming, 3D temperature profile display, read & store image sequences (rJPG, ATS and SEQ formats), etc.

bcbResearch[®] integrates in a single platform, online and offline thermographic measurements and a powerful tool for thermal sequences analysis with a large number of automatic processing algorithms to identify discontinuities and defects existing in materials.



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Non-destructive testing (NDT) of materials using infrared thermography enables to quickly and reliably analyze them, regardless of size or shape, without permanently altering their physical, chemical or mechanical properties. Non-destructive testing using active infrared thermography provides information on material, structure, physical and mechanical properties and discontinuities and defects present on the analyzed specimen. This information is obtained from analyzing the resulting thermograms; this analysis has three phases: pre-processing, processing and post-processing.

BCB THR								
Mens Camera Setup Pre-processing	Processing Post-process	ing Help						
CA CAD PCA	HOS PPTa	PPTI	TSRc TSP	DV1	DV2	MEC	THD	

Pre-processing methods:

- Defective Pixels Correction
- Fixed Pattern Noise Reduction
- Normalization

Processing methods:

- Absolute Contrast (AC)
- Differential Absolute Contrast (DAC)
- Markov Error Contrast (MEC)
- Principal Component Thermography (PCT)
- High-Order Statistics (HOS)
- Pulsed Phase Thermography (PFT)
- Thermal Signal Reconstruction (TSR)
- Total Harmonic Distortion (THD)

Post-Processing methods

- Histogram equalization
- Image Filters
- Histogram Manipulation

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