Efficient Testing Solutions

SURAGUS
Sensors & Instruments

Textural Analysis & Defect Defection for Carbon Fibers

DATA SHEET - EddyCus® CF map 6060

The **EddyCus® CF map 6060** is a desktop device especially designed for the mapping of carbon fiber texture. The testing system utilizes the electrical conductivity of the carbon fibers to gain structural information such as fiber orientation and fiber distribution. The high resolution EC-scans also enable defect detection, e.g. **gaps, fuzzy balls, misalignment, wrinkles, overlaps**, and often **impurities, cracks and delamination**.

The EddyCus® system can be used at any stage in the production: for example for carbon fiber textiles, stacks, preforms or composites. Simply flat to slightly curved parts or preforms can be checked by the table top system. Therefore, it particularly helps process engineers or R&D focused groups to evaluate the results of individual production steps.

The **software** allows to **filter** differently **oriented layers** or highlight **anomalies** such defects. The user can classify the results to deepen the understanding of the material.

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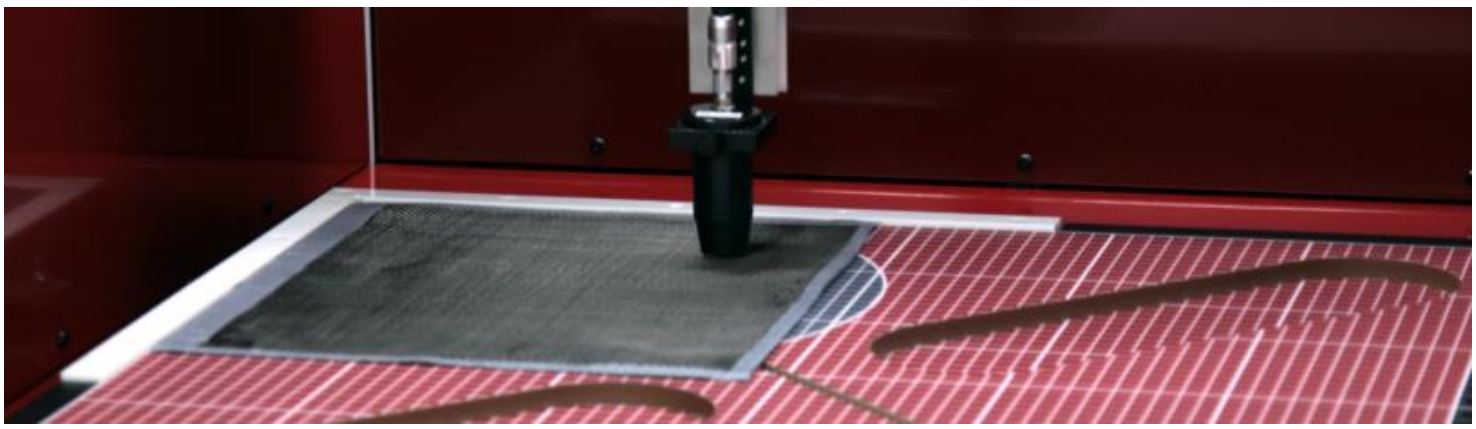
Understanding carbon fiber materials.

Certified ISO 9001

DATA SHEET

EddyCus® CF map 6060 – Structural Analysis Mapping



EddyCus® CF map 6060	
Parts geometries	Flat, slightly curved
Scan area	600 x 600 mm²
Min. pitch	0.025 mm
Speed	400 mm/sec (full scan: 30 min)
Mode	Contact and non-contact
Carbon Fiber Materials	CF fabric, textile, stack, prepreg, preform, composite,
Add-ons	Camera for positioning, Distance sensor
Device dimension	1,200 / 1,700 / 1,350 mm (w/h/d)

CHARACTERIZATION & APPLICATION

Structural Analysis

- Fiber orientation of individual layers & hidden layers
- Fiber spacing & fiber distribution

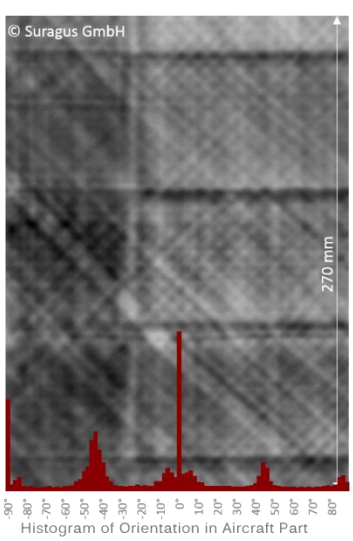
Defects & Errors

- Gaps
- Overlaps & wrinkles
- Misalignments & undulations
- Delaminations
- Fuzzy balls

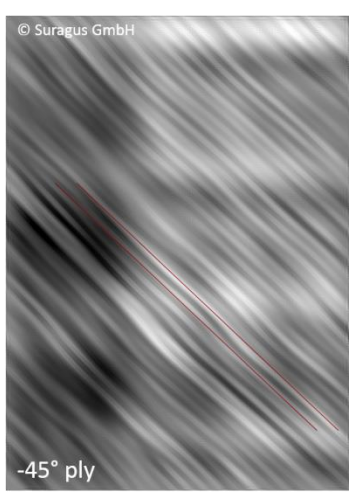
Application Fields

- Automotive & aircraft structures
- Energy sector (pipes & tanks)
- Civil engineering (bridges)
- many more

FIBER ORIENTATION & UNDULATION



Histogram of Orientation in Aircraft Part



Undulation can be detected

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