





Self-monitoring reinforced composites: DAMAGE VISUALIZATION

Fibre reinforced composites with damage visualization capability - the optimal way to implement a structural health monitoring

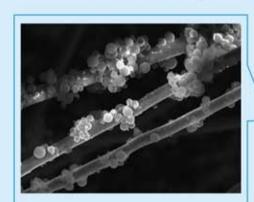
Glass fibre reinforced epoxy composite

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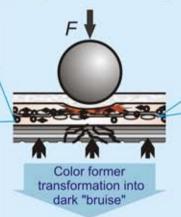
damage indicator



self-monitoring FRC with improved visual response to impact damage



Microencapsulated dye on fiberglass are the core part of damage indicator





Damage indicator is located in the upper layer of a composite. Visualization of damage happens after excess of the definite load

Visualization is provided by changing the colors on the spot under load, such wise the embedded biomimetic function provides damage visibility like a 'bruise' in the human body

Use of FRC with improved visual response to impact damage guaranties visual response appearance after specific load and gives opportunity timely replace the damaged part

Indentation pressure vs. thickness of protective layer coating at the lower threshold of damage indicator sensitivity

