FRP composites inspection

NDT for reliability and proactive service-life forecasting

UltraAnalytix by UTComp is the only proven non-destructive, non-intrusive evaluation method for safe, reliable, cost-effective testing of FRP and other composite material assets.

More than conventional ultrasonic thickness testing

Innovative post-processing of the raw ultrasonic data with a proprietary algorithm pinpoints changes to the asset condition that are invisible to the human eye.

Comprehensive reporting includes a detailed overview of the asset condition, plus recommendations to ensure safe performance and avoid unnecessary replacement costs.

The data you need for better decision-making

Service-life forecasting maximizes your asset investment and lifespan

Avoid shutdowns and confined space entry

12+ years of validated results worldwide

UltraAnalytix NDT evaluation includes:
- Corrosion barrier condition
- Structural changes occurring within the composite structure
- Composite strength
- Composite thickness
- Damage caused by abrasion, corrosion and mechanical loads due to impact, poor supports, earthquakes, hurricanes and other factors.

UltraAnalytix is an industry game-changer for accurate service-life forecasting and composite asset reliability.

Dan Falcioni,
Manager of the Materials Technology Group,
XPS Expert Process Solutions

utcomp.com
The UltraAnalytix NDT system combines ultrasonic data collected in the field, external visual inspection and analysis with a proprietary algorithm to provide validated results.

Technology comparison

<table>
<thead>
<tr>
<th>Method:</th>
<th>Ultrasonic thickness testing</th>
<th>Thermography</th>
<th>Digital radiography</th>
<th>Visual inspection</th>
<th>Acoustic emission</th>
<th>Destructive testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost:</td>
<td>Low</td>
<td>Low</td>
<td>Mid</td>
<td>Mid</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Inspection time:</td>
<td>15-60 minutes</td>
<td>15-60 minutes</td>
<td>1-4 hours</td>
<td>1-4 hours</td>
<td>2+ days</td>
<td>2 days</td>
</tr>
<tr>
<td>Non-intrusive</td>
<td>Capable</td>
<td>Capable</td>
<td>Capable</td>
<td>Capable</td>
<td>Capable</td>
<td>Capable</td>
</tr>
<tr>
<td>Inspect while equipment is operating</td>
<td>Not capable</td>
<td>Not capable</td>
<td>Capable</td>
<td>Capable</td>
<td>Not capable</td>
<td>Not capable</td>
</tr>
<tr>
<td>Mechanical integrity</td>
<td>Capable</td>
<td>Capable</td>
<td>Not capable</td>
<td>Capable</td>
<td>Capable</td>
<td>Not capable</td>
</tr>
<tr>
<td>RSL updates</td>
<td>Capable</td>
<td>Capable</td>
<td>Capable</td>
<td>Capable</td>
<td>Not capable</td>
<td>Capable</td>
</tr>
<tr>
<td>Repeatable</td>
<td>Capable</td>
<td>Capable</td>
<td>Not capable</td>
<td>Capable</td>
<td>Capable</td>
<td>Not capable</td>
</tr>
<tr>
<td>Ease and reliability of data capture</td>
<td>Capable</td>
<td>Capable</td>
<td>Not capable</td>
<td>Not capable</td>
<td>Capable</td>
<td>Not capable</td>
</tr>
<tr>
<td>Minimizes confined space entry</td>
<td>Capable</td>
<td>Capable</td>
<td>Capable</td>
<td>Capable</td>
<td>Capable</td>
<td>Not capable</td>
</tr>
</tbody>
</table>

Applications

UltraAnalytix NDT is suitable for all composite materials including:
- Fiber-reinforced plastic / polymers (FRP)
- Carbon fiber
- Dual laminate
- High-density polyethylene (HDPE)
- Polypropylene

Industries

Chemical Processing
Mineral Processing
Oil & Gas
Water & Wastewater
Wind Energy
Pulp & Paper
Food Processing
Infrastructure
Quality Assurance
And Many Others

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