REAL-TIME 3D SPRAY CONCRETE MONITORING

SIMPLE | SCALABLE | AUTOMATED
Safer, smarter sprayed concrete application

Sprayed concrete plays a big role in the safety and success of your mining, tunnelling or civil engineering projects. There’s a lot at stake.

What if you knew, in realtime, the thickness of the concrete you are applying to tunnel walls? This would help you to know you’re neither wasting money because of excessive application, or not meeting the minimum thickness requirements. Applying shotcrete inconsistently may compromise the structural integrity of the tunnel, and the safety of the workers and machinery within.

Introducing PROCESSMONITOR LIVE, a smarter way for sprayed concrete application, developed with a leading industry provider.

- Saving time
- Saving money
- Quality assured
- Saving resources
- Saving lives
Advanced underground 3D tunnel visualisation
Safer, smarter sprayed concrete application

For operators:
- Identify problem areas straight away – get the job right the first time
- No prior surveying knowledge is required
- Understand the thickness across the full spray area, not just a test area
- Easy to use scanner operation – press one button to start scanning
- See the results clearly, in front of you as you spray
- Built for use in the harshest environments

For managers:
- Safer tunnels and underground mines
- Increased efficiency of mine operators
- Save wasted concrete and additives from excessive application thickness – saving time and money
- Gain useful management information – understand wastage and calculate the total over or under spray according to your own requirements
- Empower operators to do their job without the need for specialist surveying knowledge
- Ensure your spray thickness contractual and legal obligations are met
- Full on-site training, and ongoing after sales support
PROCESSMONITOR LIVE was designed and built for the harshest environments.
How does PROCESSMONITOR LIVE work?

1. A light weight, medium range laser scanner is attached to the sprayer unit. A control unit is fixed within the spray rig.

2. You’re ready to start scanning. The first scan you do is your reference scan, and future scans will be compared to this one.

3. As you apply sprayed concrete to the tunnel walls, the scanner will create a precise 3D visualisation of the tunnel wall, displayed on the control unit. The colour scale (which can be personalised) will clearly show the areas where too much, or too little sprayed concrete has been applied.

4. You can repeat the scans as required. The scanner will continue to update the 3D visualisation, helping you to apply an even layer, of the right thickness.

Fixed or vehicle mounted scanner   Capture on-demand or automatically   Realtime processing   Accurate point cloud data   Exportable file formats (.CSV/.LAS)

PROCESSMONITOR LIVE improves the efficiency and safety of sprayed concrete applications, using advanced technology to remotely scan areas where repairs or concrete application may be needed.

PROCESSMONITOR LIVE, for safer, smarter mines.
Improve the efficiency and safety of sprayed concrete applications, wherever you are.
The 3DLM SR-50 scanner has been designed especially for harsh, underground environments.

<table>
<thead>
<tr>
<th>Technical specification</th>
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<tbody>
<tr>
<td>Maximum range</td>
<td>50m</td>
</tr>
<tr>
<td>Horizontal scan angle</td>
<td>0-180°</td>
</tr>
<tr>
<td>Vertical scan angle</td>
<td>-60 - +140°</td>
</tr>
<tr>
<td>Horizontal angular resolution</td>
<td>0.25°</td>
</tr>
<tr>
<td>Vertical angular resolution</td>
<td>0.25°</td>
</tr>
<tr>
<td>Power supply</td>
<td>24V DC</td>
</tr>
<tr>
<td>Temperature range - operating</td>
<td>-30° - +50°C</td>
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<tr>
<td>Temperature range – storage</td>
<td>-30° - +80°C</td>
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<tr>
<td>Ingress protection rating</td>
<td>IP65</td>
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<tr>
<td>Accuracy</td>
<td>&lt;5mm</td>
</tr>
<tr>
<td>Number of points in a scan</td>
<td>&gt;500,000</td>
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The scanner is available as a stand alone system or with vehicle mounts.
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