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Abstract

3D REFRACTORY LINING EVALUATION SCAN (LES) TECHNOLOGY

RHI Magnesita's Lining Evaluation Scan (LES) utilizes the latest 3D laser scanning technology, combined with almost 200 years refractory experience and knowledge, to deliver a high precision lining thickness model of your kiln. Traditional methods to measure the thickness of refractory linings deliver insufficient discontinuous data often leading to subjective assumption-based decisions and do not support predictive maintenance programs or refractory optimization. The Leica high-speed 3D laser scanner with integrated high-definition resolution imaging is a safe, battery operated, non-contact point cloud technology delivering $\pm 1.9\text{mm}$ 3D accuracy across the entire 360 degrees of your lining surface. Our proprietary web-based reporting software system analyzes this 3D point cloud specific to each plant process. Precise lining measurements with exact coordinates are displayed on colorized thickness graphs and visual surface maps. The fully customizable reporting tool ensures your plant has the complete lining profile in the same amount of time as traditional methods allowing your team to make technical data-based decisions. The database allows for refractory optimization by overlapping previous scans to calculate lining wear rates over a specific timeframe. Accurate 3D refractory lining measurements with our LES technology is the most comprehensive lining thickness solution available for your process.

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