Tire Mold Segment Manufacturing with SLM®-Technology

Fast, accurate and inexpensive tire mold production
SLM Solutions, headquartered in Luebeck, Germany, is a leading provider of metal-based additive manufacturing technology, also commonly referred to as “3D printing.”

SLM Solutions is proud to “drive & lead” the tire world in a new generation, by using the SLM® technology for tire molds.

The Selective Laser Melting technology (SLM®) enables the production of new tire tread mold segments in shorter time, less expensive and using three-dimensional geometries for prototype and mass production tools.

Due to the layer by layer process using fine metal powder, which is melted with a 400 W or 1000 W laser or with our multi laser technology up to 4x 400 W in the SLM® 500HL, SLM® technology allows tire makers to create new, more intricate tread designs with fine small gaps or even a three-dimensional and internal undercut structure design for the next generation of tire profiles. With the quad laser (4x 400W) technology in combination with our patented bi-directional recoating system, SLM Solutions increases the build rate up to 90% compared with the twin configuration (2x 400W).

Tire manufacturers are turning to the SLM® 280HL or SLM® 500HL machine series to balance improved traction on wet surfaces versus stability on dry surfaces with optimized slits on a tire tread, known as tire blades.

The SLM Solutions SLM® 125HL, SLM® 280HL and SLM® 500HL series can print different metals, such aluminium alloys, cobalt-chrome, super alloys, titanium as well as tool and stainless steel with more complex details and designs than traditional methods.