JENOPTIK

MORE LIGHT

JENscan® Tire

Prototyping for a new Era in Tire Design

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Technology

The scanner-based JENscan® Tire laser system is designed for a fast production of prototype tires. The combination of highly sophisticated path planning and the laser tool enables the creation of completely new and before not producible tire profiles. The first step is preprocessing and conversion of CAD data into a format that can be interpreted by the system. Step two is the measurement of the actual tire and placement of contours based on the collected data. Now the real laser processing begins. The combination of an intelligent process planning, and a local exhaust ensures minimal thermal stress on the rubber.

Application

Laser based tire prototyping and flat sample processing for functional testing or marketing purposes.

Features

- Jenoptik pre-processor software for conversion of customer data with defined geometry descriptions
- Tire recognition system for adaptive scan field placement
- Single scan fields stitching
- Visualization on HMI
- Cycle time neutral path planning and programming
- Autonomous and unmanned tire prototyping
- Tire processing log file / traceability

Properties and Benefits

- High repeatability
- Tire and flat sample processing
- Tread width >3mm
- Sipe width 0,2-3mm (depending on depth)
- Structure depth <12mm
- Structure taper angle 85°-90°
- Pitch transition >70µm
- Min. tire size 105/70 R14
- Max. Tire size 445/75 R22,5
- KATASORB®A 2.0 exhaust and filter system

Pic 1 Jenoptik summer profile

Pic 2 Jenoptik winter profile segment directly after processing

Technical specifications

Footprint	w=4 m, h=4 m, d=10 m incl. peripherals and service area
Tire mount	Adaptable wheel hub mounting
Operator panel	24“ multi-touch panel incl. RFID-reader
Laser	200 W ns fiber laser
PLC	SIMATIC S7 with safety functions
Direct process evaluation	Integrated image processing unit

We reserve the right to make changes in the interest of technical progress.

JENOPTIK Automatisierungstechnik GmbH
Konrad-Zuse-Strasse 6 · 07745 Jena
Germany · P +49 3641 65-2532 · F +49 3641 65-2540
laserprocessing.sales@jenoptik.com · www.jenoptik.com