laser structure

Laserstructuring Machines

Gehring

Advanced Honing Technology

Fascination Laser

Light as a tool in production engineering - the laser with its versatility, still fascinates all users of this method. Since a long time Gehring has discovered the concentrated light for production. In cooperation with our customers, we have developed a number of different laser applications and installed them in appropriate machines.

To industrialize laser structuring, machines were developed that work in modern production lines with high process reliability. Our laser machines offer this process reliability and work reliable around the clock.

Q-switched solid state lasers with Galvo scanner optics are used as beam source. You can use laser beams for surface structuring as well as laser for marking and data matrix codes.
To reduce the cycle time, multiple beam sources can be arranged.
The arrangement depends upon the machining job. During the structuring of bored segments, the beam passes into the bore at a diagonal angle.
During machining of the front face, the beam guidance to the machined surface takes place normally.

For quality control of the parts, imaging cameras can be used.
Data matrix codes can be read or the surface can be probed with another specialized camera.

Laserstructuring Machines

Typical applications of our laser systems are:

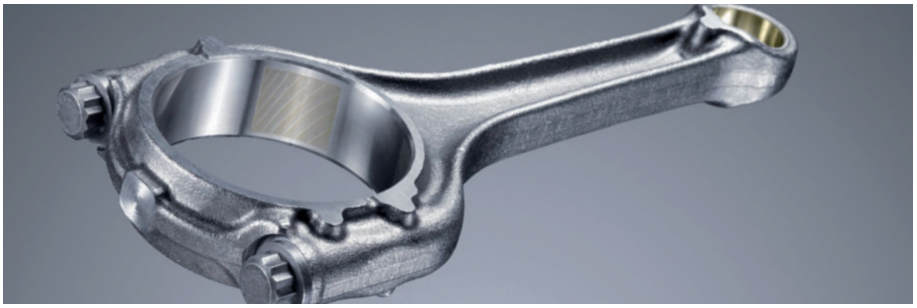
1. Laser structuring to improve static friction –
To increase the force of static friction of the friction partners and to abridge the components, each of them is laser structured.

2. Lasing of Data-Matrix-Codes –
Components can be marked with production-relevant data.

3. Marking lasers –
Unique component markings are lasered into the parts.

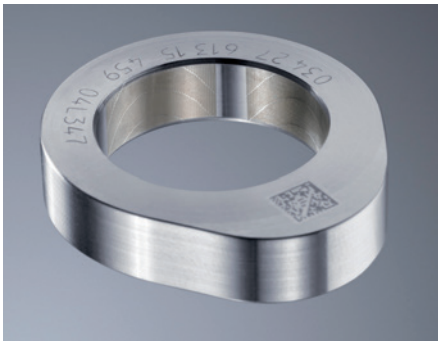
Advantages

- Substitution of diamond foils (press fit connection)
- Substitution of slot and feather key (connection hub–shaft)
- Freely selectable surface structure
- No tooling costs
- Short machining time of a few seconds (depending on job and layout of the machine)
- No tensioning of parts
- Practically no heating of the part
- High reliability
- High degree of automation
- Worldwide experience in series production



Connecting rod with structured big eye

Chain wheel (front face connection)



Cam of a constructed crankshaft

Trust in the technology leader with many years' experience and global presence!
Innovative technology combined with an economical mindset sets us apart.

Gehring® Technologies GmbH • Gehringstrasse 28 • D-73760 Ostfildern
Phone: +49 711/3405-0 • Fax: +49 711/3405-295 • info@gehring.de • www.gehring.de

www.dege-kommunikation.de 09/2015