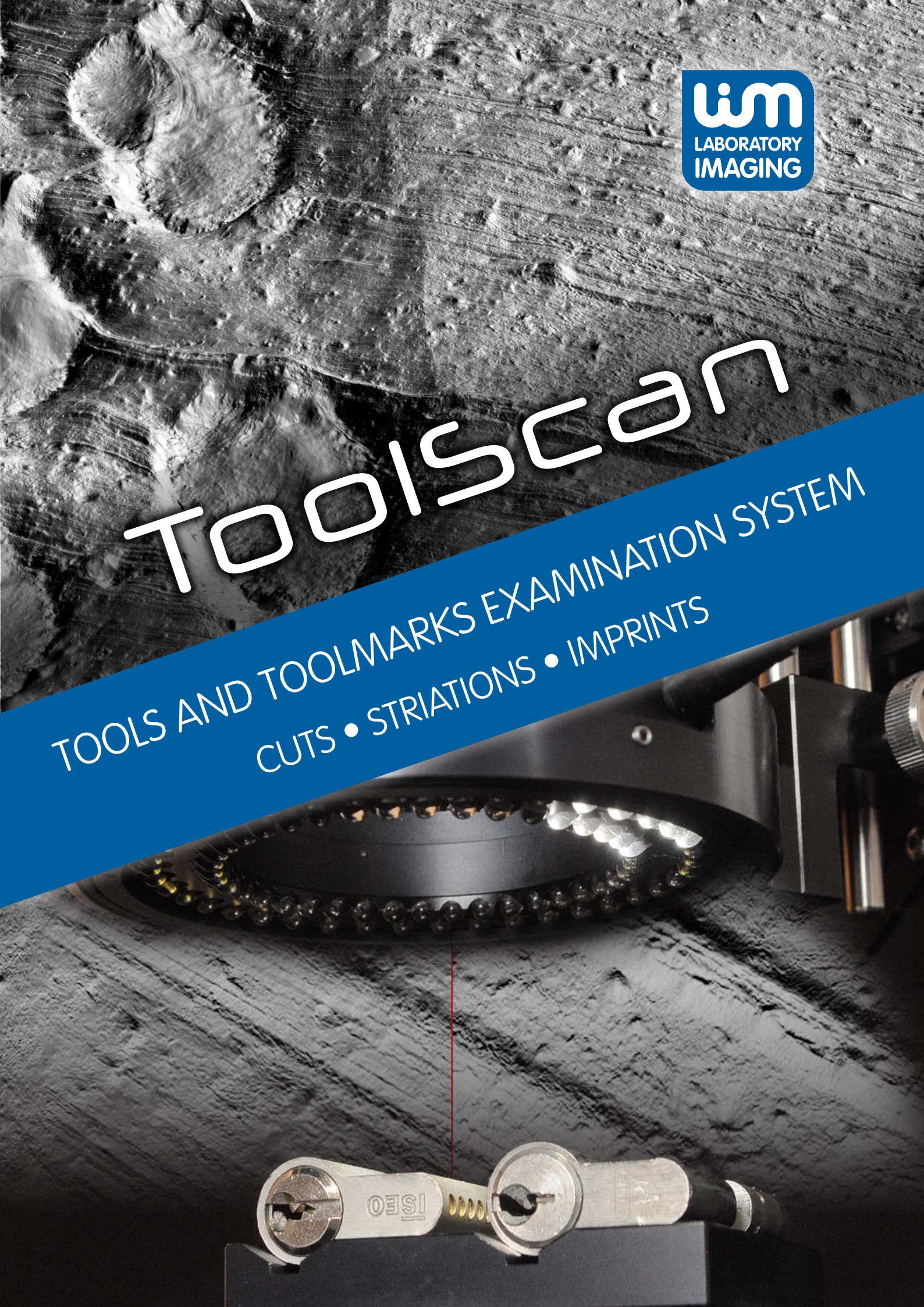
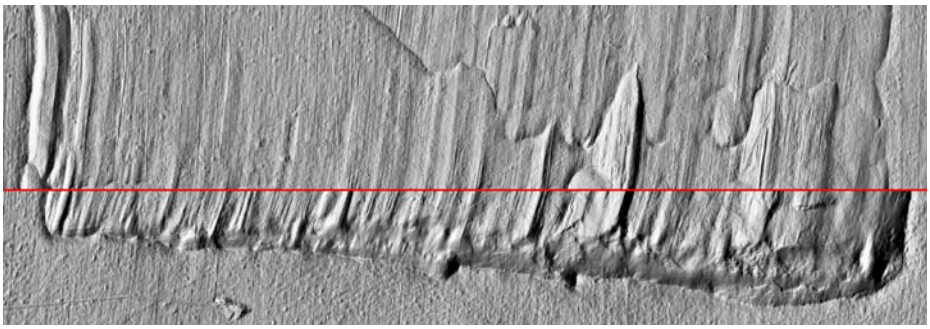

LABORATORY
IMAGING
ToolScan
TOOLS AND TOOLMARKS EXAMINATION SYSTEM
CUTS • STRIATIONS • IMPRINTS

A COMPLEX SYSTEM FOR SCANNING OF TOOLS AND TOOLMARKS

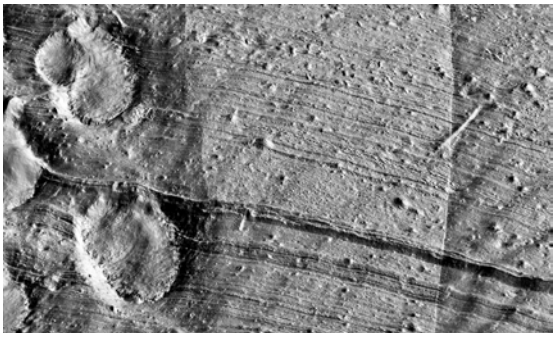
The ToolScan System by Laboratory Imaging represents a complete solution for forensic examination of tool marks. It is designed to provide live real time image and comfortable straightforward scanning of high resolution all in focus 2D and 3D images including photometric data. The 3D image is a „texture free" representation, called digital silicone casting. It removes all material-specific lights and shades and emphasizes the shape and height profile. Images can be saved into the database and shared via network. A full set of comparison functions is at hand for precise matching.



Comparison of cylinder locks toolmarks

VERSATILITY

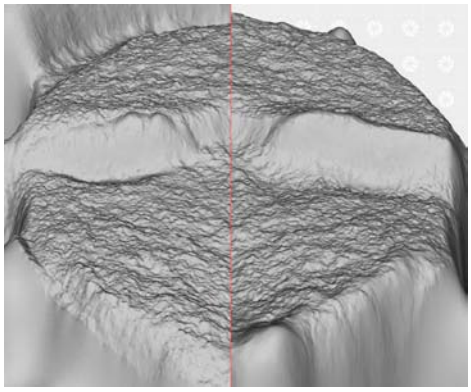
Cylinder locks, padlocks, cables, tire pieces, cartridge cases, plastic objects – these are just examples of objects which can be scanned. ToolScan is designed for maximum versatility. The supplied set of holders including a jaw vise and tilting mounts enable precise positioning inside the device for the best scanning results. Tool parts (e.g. pliers jaws) can be scanned directly.



Cut in a tire

3D surface of a pliers jaw

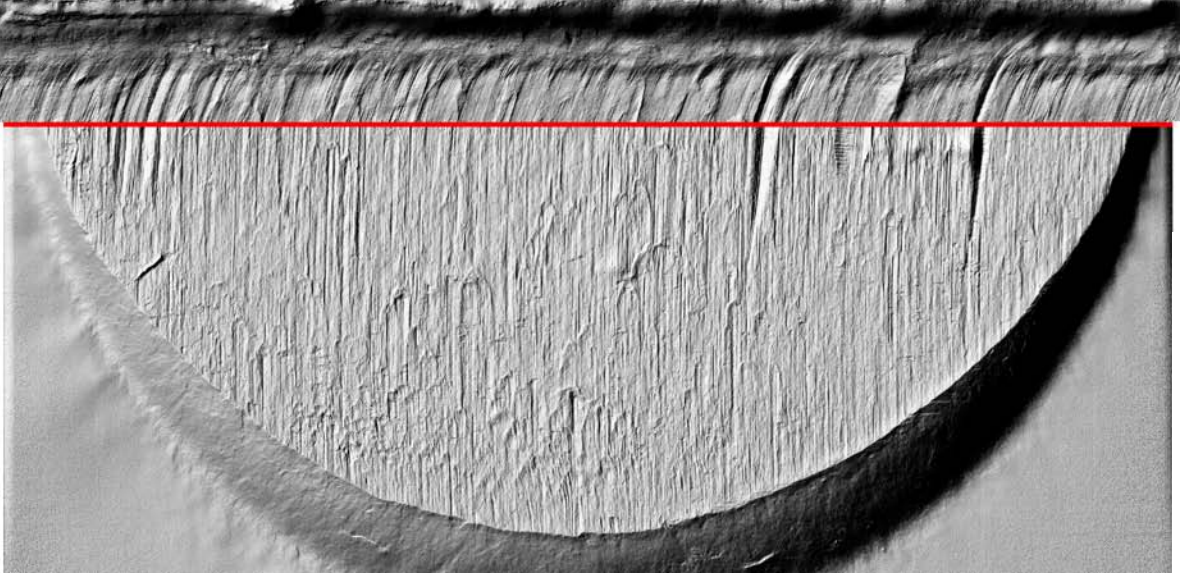
Cartridge case bottom



Matching of opposite parts of a broken nail

Cut cable

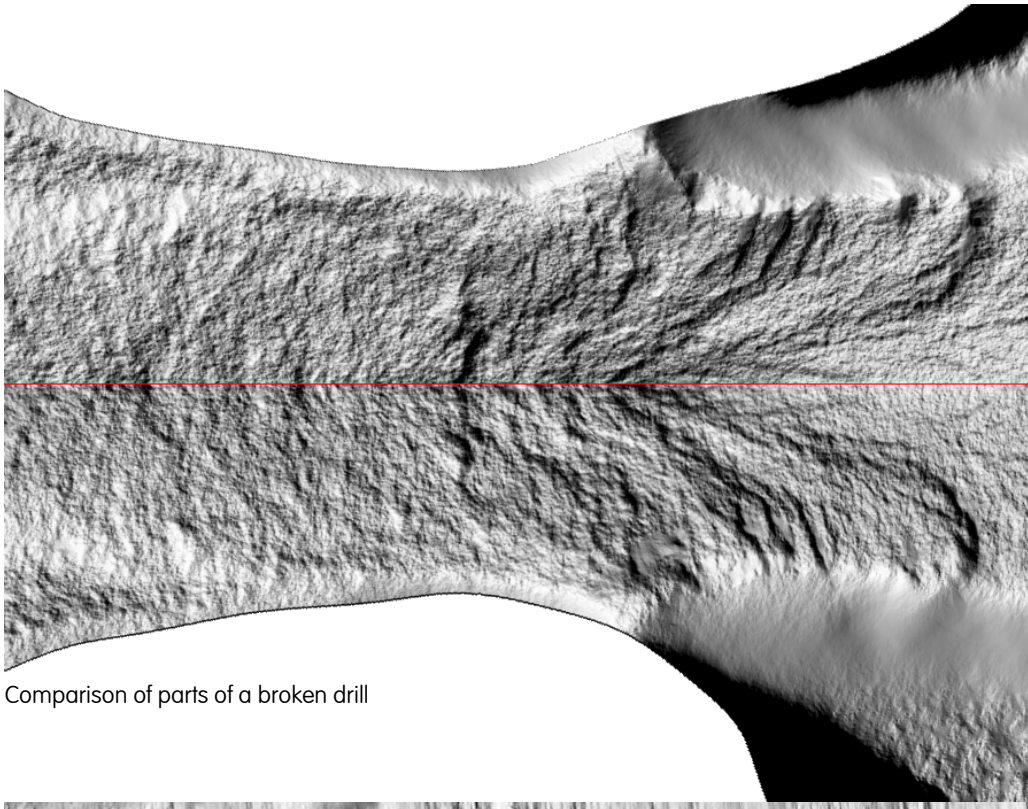
Wire-cutting pliers blade



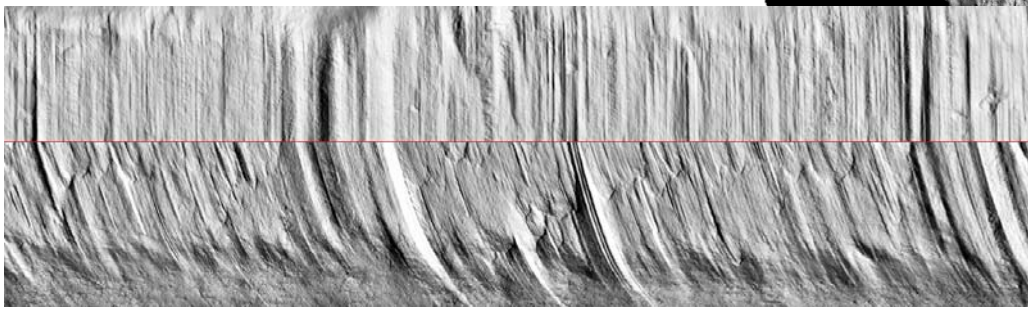
Comparison of cut wire and test cut into lead

COMPARISON

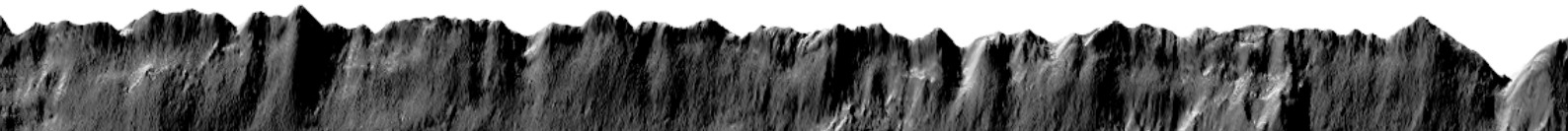
Besides standard measurements, image processing tools and Z-profile measurement, there is a rich set of 2D and 3D comparison tools available with user friendly interface and intuitive image handling. The texture free topography can be displayed under any illumination direction which can be easily varied and synchronized between compared images. The comparison modes include transparency mode, 2 images side by side mode with rotatable or freely adjustable polygonal split line, or up to 8 images preview.



Comparison of parts of a broken drill



Comparison of a cut padlock with a test cut into lead



DEVICE FEATURES

Acquisition Features

- Top quality monochrome digital camera (optionally color)
- Top quality telecentric lens
- Precise laser focus
- Segmented circular LED illuminator
- High resolution of 3 µm/px

Motorization and Control

- The device is fully controllable via the ToolScan software and a programmable joystick
- Precision stepper motors are used to move the object in XY plane and for focusing

Accessories

- Set of holders including a jaw vise, tilting mounts, and magnets

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