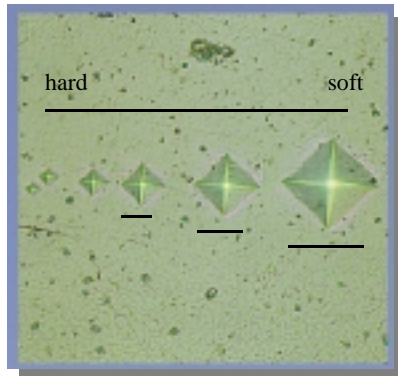
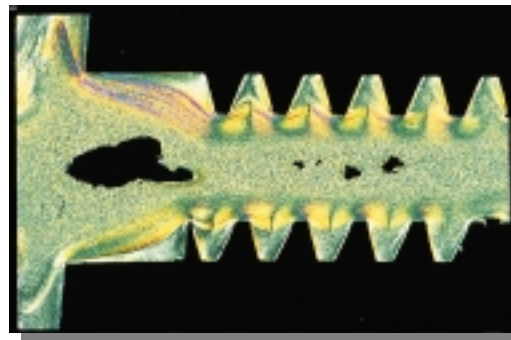


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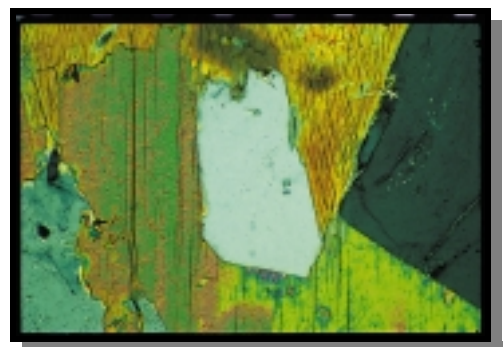


Hardness Test



Poor casting of a bolt

Phases in steel



A little bit of heavy metal

Metallurgy is the study of extracting and refining metals. To do this you need to understand the structure and properties too.

At university and technikon level this subject is offered to students who wish to get involved in the huge market of steel making and processing.

Here too light and electron microscopes are used to study the various materials that come through the lab or plant.

The light microscope is used in various ways which are illustrated above.

By measuring the mark left by a diamond tip punch in a piece of steel, the metallurgist will very quickly be able to determine the hardness of the steel.

Cross sections of failed nuts and bolts can often show stress points, poor casting methods or metal failures.

By looking at the phases in various metals the metallurgist can determine the origin and quality of metals.



This information is brought to you by the Microscopy Society of Southern Africa in the interest of furthering research, awareness and development of microscopy in the region.

Contact Alan Hall of the MSSA committee at +27 (0) 12 420 2075 for more information.
web site: <http://www.microscopy.org.za>