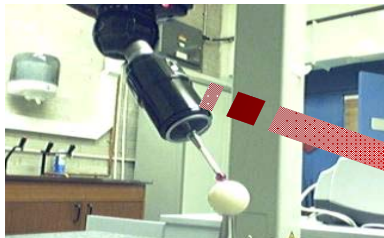




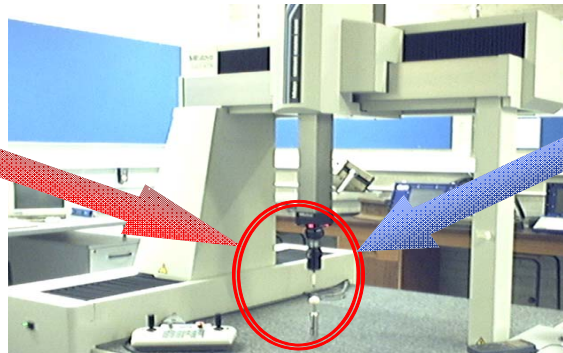
The coordinate measuring machine (CMM) is a mechanical system that moves a measuring probe to determine the coordinates of points on the surface of a workpiece. The CMM comprises: the machine itself; the measuring probe; the control system, and the measuring software. The facility is equipped with a Mitutoyo Euro-C-A 776, incorporating an advanced high speed scanning system, which enables high quality data to be collected quickly and accurately.

FACILITY: MITUTOYO EURO-C-A 776

- Accurate determination of shape in 3D
- Capable of product digitisation for reverse engineering
- Can quantify distortion in three dimensions
- Accurate quantification of shape for in-tolerance/out-of-specification assessment, & CAD/CAM verification
- Capable of contour measurement for residual stress analysis



Contact Scanning Probe
(SP-600)



CMM can be mounted with touching (left) and non-contacting (right) probes.



Non-Contacting
Optical Probe
(Metris-LC15)

Our CMM from Mitutoyo Ltd. is equipped with an advanced high speed scanning system. This enables large quantities of high-quality data to be collected quickly and accurately.



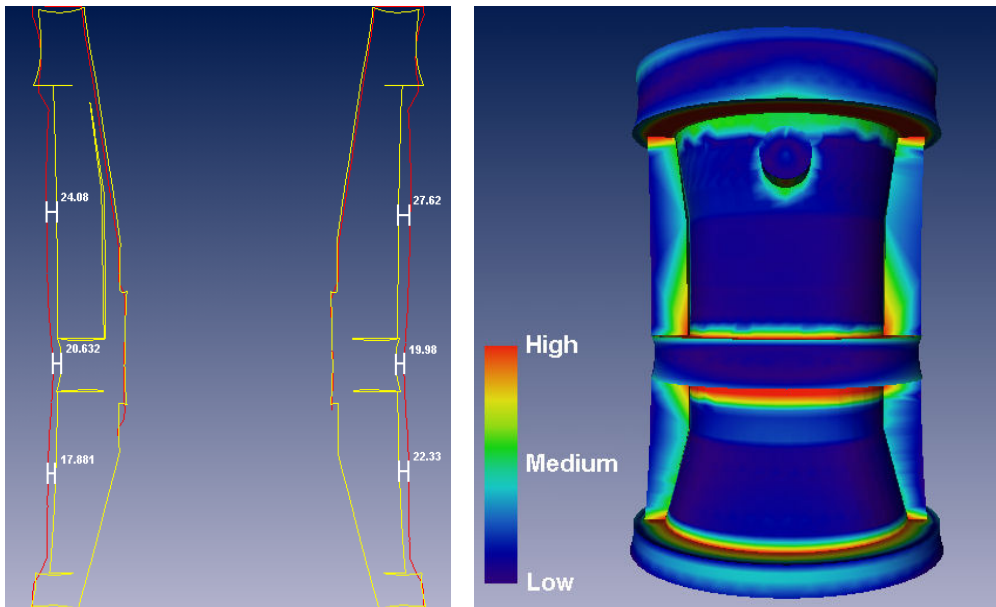
The CMM can make precise 3D measurements—here it has been used to scan our logo plate.

Surface Profile Measurement: Railway Rail



The surface profile (exaggerated) of the cut surface as determined by CMM (left)
The inferred longitudinal stresses prior to the cut (right)

3D surface comparison: near net shape Hot Isostatically Pressed (HIPped) casing prototype



2D line profile comparison between actual (red line) scanned and CAD data (yellow line).

3D profile of comparison result between actual (CMM scanned) and CAD data, colour represents the tolerance variation between these datasets.

Specification

Measurement Range (L×W×H):	705mm × 705mm × 605mm
Resolution	~0.5µm (SP-600) ~25 µm (Metris LC-15)
Sampling rate:	~30mm/sec or higher (SP-600) ~19200 points/sec (Metris LC-15)

For more information on CMM, contact:
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