

INVESTIGATION OF SURFACE TEXTURE
OF MACHINED COMPONENTS

Project Report Submitted by:

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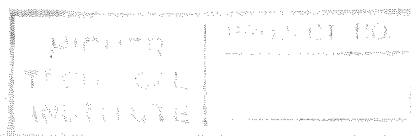
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INTRODUCTION

"There shall be standard measured of wine, ale, and corn. Through out the Kingdom there shall also be a standard width of dyed cloth russet and haberject, namely two ells within the selvedges. Weights are to be standardised similarly".

(Magna Carta, Clause 35, AD 1215)

"At one time the terms "rough machine", "medium machine" and "fine machine" or equivalent symbols, were used on drawings, leaving the surface to be controlled by limitations of the machining process involved and arbitrary opinions of operator and inspector which all too often, did not coincide.

Most of the uncertainties of specifying surface requirements have been eliminated by development of instruments for the measurement of surface texture on a numerical basis and by the issue of various national standards".

(B.S. 1134, part 2, 1972)

Both of the documents quoted above, although different in time by over seven and a half centuries are dealing with the same

problem - that of measurement - and both solve it in the same way by laying down standards of measures and specifying methods of making the measurements. The clause in Magna Carta looks at the problem from the point of view of commerce and what we now call "consumer protection"; The British standard discusses the problem from the aspect of engineering quality control.

It is obviously very important to standardise the common weight and measures (e.g. The Kilogram, metre, litre) used in everyday life in trade, in engineering and scientific research. The present universal acceptance of these measures is the culmination of along series of attempts, extending back into biblical times, to enforce the use of standard units of measurements, Magna Carta being a comparatively late decree in the history of standardisation.

However there are some other qualities of manufactured articles which cannot be so easily specified. Colour is non example; Surface finish is another and this is the subject where our investigation is based on.

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