

Kocher and Beck visit, 14<sup>th</sup> September 05

## Flexible manufacture and micron tolerances for Flexible dies

The East Midlands branch of IOP - The Packaging Society started the visiting season with a fascinating trip to Kocher and Beck, a leading manufacturer of flexible dies primarily for the labelling and envelope industries. A die is part of the production process and is in effect the blade that cuts the shape from the substrate material.

We were treated to a detailed and very interesting exposition of the complexities involved in what may at first glance appear to be a relatively simple item, but which on closer inspection is extremely demanding to produce. For example, in label production, the die has to cut cleanly through the label stock and the adhesive layer without damaging the backing material of the label. This has to be achieved over the full width and repeat length of the label and at high speed, up to 100 metres per minute. This requires micron tolerances across a die which may be tens of cm on a side. To put this into perspective, a variation across a die of +/- the width of a human hair would result in a reject, and a bad reject at that.

To help them achieve this accuracy Kocher and Beck have invested in machinery design based on very heavy and stable stone bases and leading edge computer aided cutting and sharpening systems. Dies are photo-etched and then sharpened on these machines, which are unique to the global Kocher and Beck organisation, before being finished off in a very high precision grinding operation.

All this is achieved within a 24 hour turnaround, necessary to feed the very demanding and fast-moving industries in which they operate.

We would like to thank David Morris and Roger Stebbings from Kocher and Beck for their welcome to us and the terrific effort they put in to make the visit such a success.