

WHERE THERE'S WILL THERE'S A WAY



QUARTET - THE DESIGN STORY OF STRAND'S NEW LUMINAIRE RANGE

In the world of industrial design, one thing you can count on is variety. Not only do you have to find practical solutions to client's problems but you have to end up with a product which is aesthetically pleasing. Enter Will Bentall.

Will is a senior partner with London Associates and in recent months has been tackling the design problems associated with an injection-moulded cat feeder, an exhibition hall which folds out of an articulated trailer, surgical lasers and, most importantly, a new luminaire for Strand, the Quartet.

So how is a luminaire designed? How much market research is carried out to determine need and how does the basic shape evolve, let alone the workings?

Will explained, 'We like to become involved in a project as soon as possible — in this instance, it was as soon as Strand's R + D team knew what the optical path would be.'

In the case of the new Quartet range, the optical design has been based around a 650W lamp. It will replace the well-known Minim range, which has been limited to use with a 500W lamp.

Quartet project leader, George Patterson, is a member of Ian Thompson's R + D group at Kirkcaldy and prior to London Associates design involvement had already determined the fundamental optical arrangement and would later be responsible for the development and testing of every aspect of the product. Not only did optical systems for fresnel, prism convex and profile versions have to be developed, but thermal considerations, electrical safety and mechanical features all needed to be explored and

proved before the first prototype could be built.

The market for such a luminaire is seen as small theatres and schools. What was needed was something to capture the affection of the lighting world, in much the same way as the old Pattern 23 and 123 luminaires had done in the 1950's.

Naturally enough, this called for total co-operation and constant exchange of information between Will and the Strand R + D department in Kirkcaldy, Scotland, where the practicalities had to be assessed and workable solutions found.

Will began the design with basic layout drawings of the optical systems.

He said, 'I have to imagine it as an assembly. In this case it was to be a range of products, of which there are four, so four sets of information would be needed.'

'As soon as we know the requirements of the various pieces we start to discuss how the range of products is broken up into components. We managed to get one lamp housing to suit the whole range.'

To illustrate the complexity of the problem, Will produced an exploded drawing to demonstrate the complexity of the assembly and the vast number of parts.

One of the instructions from Kirkcaldy was to reduce greatly the number of components in the new luminaire.

Will explained, 'We had to stand back and concentrate on making four different items in one product range.'

The result was that all four luminaires in the range have a common lamp-

house. Having the same rear end meant that the production line would be taking large volumes. This allowed the production team to allocate a bigger investment in tooling for the lamp house components than would otherwise have been possible.

Varying methods open to the team included: die casting, extrusions or mouldings. The final decision was to opt for aluminium die-casting for the rear end and extrusions for the front. Having settled this point, the next stage was to look at the end-user needs and then work as much of that information

■ Will Bentall

