LATEST MANUFACTURING TECHNOLOGY FOR KIRKCALDY

Alongside the A92 in Fife, Scotland, stands a 25 ft tall man, banging a gong. He is one of the first things people see when they arrive at Strand Lighting's huge 130,000sq ft Kirkcaldy factory set in 42 acres of park land. The size is just one of the surprising things, another is the diversity of operations that are carried out in the plant including: computer numerically controlled (CNC) presswork, cable and harness assembly, silk screening, electronic and electro-mechanical assembly and test, powder coat painting and luminaire R&D.

Through the glass wall of the reception area visitors can the see a recent investment. A PCB assembly area containing the latest fully automated equipment for surface mount placement and conventional "through hole" insertion of components for printed circuit boards. The machine can place up to 400 components onto a PCB in around five minutes and produces upwards of 50,000 boards per annum!

THE BENEFITS OF SMT

Many of Strand's newest electronic products (the GSX, LBX, LD90 and EC90/CD80 *Supervisor* processors and Digital Environ - DE90) include surface mount technology (SMT) PCBs. This technology involves minute leadless components being pasted onto the surface of the PCB by a robotic system, and when the board is subjected to the latest in convection re-flow heating, the pre-soldered tracks fuse with the component connections. Surface mount technology not only permits a higher density and thus more compact printed circuit board to be designed, but also significantly increases the reliability of the finished product.

As part of the recent updating of the Kirkcaldy production facilities a £300,000 extension to the electro-static paint plant has been added. This consists of two continuous conveyor lines allowing two different colours to be sprayed simultaneously. For example, black Coda castings on one line, and grey LD90 front panels on the other.

The bare metal components are hooked onto the line and initially pass through a three stage chemical etching and cleaning process, the spray of which is so dense, you cannot see from one end of the facility to the other. It is then dried before moving on to the electro-static powder coating area where the paint is attracted to the metal using a high electric charge. This results in a very smooth and even finish, which is then baked onto the metal.

If required, once it has cooled, it can proceed to the silk-screen area where over 100 different types of legends can be affixed. Not all components can be painted using the electro-static process, so there are additional wet paint spray booths for the more difficult or sensitive items.

Strand Library

Part of the new electrostatic paint plant with the PCB facility (inset).

INVESTING IN QUALITY AND PEOPLE

Overall, £ 3.5M has been invested in recent years in developing a major, modern manufacturing facility in Strand's Scottish plant. Total quality is the ultimate objective, not just in product terms, but in every aspect of the business. The factory have BS5750 Part 1, (ISO9001) the highest quality accreditation under their belt and are continually seeking to improve administrative and production procedures.

However, according to Neil Gilmour, Director of European Operations, the most valuable weapon in the Kirkcaldy armoury is it's multi-skilled, highly flexible workforce of which he is justly proud. "The attitude and commitment of our workforce is quite simply excellent" says Gilmour "They are prepared to do whatever is necessary to satisfy our customers needs, what else would you expect from a workforce with over 1500 years of experience between them building Strand products ?".

BE LIGHT WISE IN '94

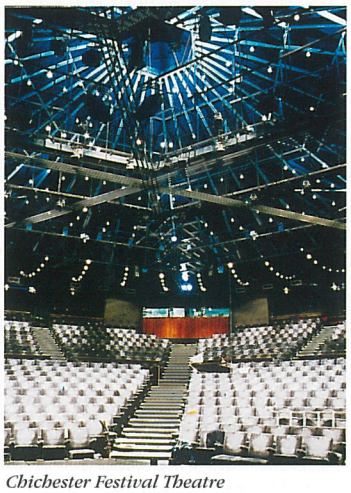
The Association of Lighting Designers (ALD) was formed in the UK in 1963 by the six leading names in the profession at that time; Joe Davis, Richard Pilbrow, Michael Northen, Bill Bundy, John Wykham and Charles Bristow.

The current recognition of the creative importance of the lighting designer in both the theatre and commercial environments is probably largely ascribable to the ALD. But the role of the ALD has not simply been about achieving recognition for the lighting designer, it is very much an active organisation with responsibilities to end users of lighting design as well as to the designers themselves. The ALD is also actively involved with advancements and ideas that affect all aspects of lighting.

Membership of the ALD spans all areas of lighting design, architectural, theatrical, television, film, special effects, lighting product designers and educationalists in the field. There is also a large student membership, a healthy Associate membership amongst people who are indirectly involved in the profession, and a growing international member base.

Chris Watts has just been elected Secretary of the ALD and is excited about the continuing role and revitalised importance of the Association. Chris' extensive direct experience on both sides of the Atlantic as a lighting designer for theatrical productions and as a member of the project design team with Theatre Projects Consultants (he has recently assisted Allen Russell on the new house lighting system for the Chichester Festival Theatre) puts him in a good position to understand exactly what is needed by members of the ALD and what still needs to be done to communicate the message of the Association to end users. "Lighting is an art form which is used by people on a day to day basis but is still underrated and misunderstood" he explains. "The ALD is a respected mouthpiece for lighting designers which can help both the users of lighting and practitioners in the field to achieve better results."

The year ahead is promising innovations including the publication of the first yearbook with names, contact numbers and useful information about the Association and moves to becomemore widely known through a presence at the PLASA and ABTT shows.



Theatre Projects Consultants.

Chichester Festival Theatre

The ALD has an Executive of ten who meet every six weeks and reaches its members through a monthly newsletter *Focus* and a programme of varied events, visits and talks by what might be termed leading lights in the industry. Chris is keen to encourage a dialogue between the Executive of the ALD and its members to ensure that each sector of the industry is well represented and their concerns are aired.

Wherever you are, if you are interested in lighting, why not join the ALD this year and become more involved in the lighting art? For more information about becoming an ALD member, contact Chris Watts at the ALD office +44 (0)71 482 4224, or use the attached reader reply card.

Under the very active leadership of Chairman Michael Northen and with the enthusiastic day to day input of Chris Watts, the ALD is set to enter a new era - the results will be illuminating.

ALD#