

Press release
Lemgo, 30 June 2010

Modernised Zumtobel factory in Lemgo makes 50% energy savings **Modern LED luminaire production at perfect working conditions**



B1 | Modern industry: Following extensive renovation, the Zumtobel factory in Lemgo presents itself in an entirely new light.

The manufacture of high-quality LED luminaires places new, more complex requirements on production conditions. Zumtobel has extended digitalisation in the world of lighting to include production by completing its renovation of plants 1 and 2 at its manufacturing site in Lemgo. Extensive renovation of the plant has not only improved the working conditions of around 500 staff, it has also boosted productivity and quality while cutting energy consumption by 50%. This has enabled Zumtobel to fulfil its aspiration of manufacturing advanced, resource-efficient LED products in an environmentally responsible manner.

Optimising the lighting installation by cleverly combining daylight and artificial lighting provided the greatest scope to make savings. Daylight does not cost money. The number of existing skylights in the factory was increased by

around 40% in order to increase the amount of incident daylight.

The existing batten luminaires with open light distribution (2x58 W) were replaced by the controllable version of the efficient Tecton continuous-row lighting system (2x49 W). Wide-angle optics produce a pleasant lighting effect and offer good economic efficiency.

The greatest potential for energy savings was tapped into by consistently using daylight-based luminaire control. The external daylight sensor installed on the building's roof measures the amount of incident daylight depending on the position of the sun. The Luxmate Professional lighting management system supplements this daylight with just enough artificial light to achieve the target illuminance level of 500 lux. This reduces the lighting installation's po-

wer requirement by up to 60%, depending on the time of day and prevailing brightness. The lighting management system allows individual brightness adjustment at all times. Additional luminaires are installed at all workstations in order to give employees the ability to individually adjust lighting levels over a range from 500 to 1000 lux.

The newly installed lighting management system makes it possible to program lighting sequences which are in harmony with the circadian rhythms of the human body clock.

The redesigned bright floor covering with a reflectance of 40% and bright walls made it possible to achieve a further 15% energy saving.

At the same time, the light and airy working atmosphere visually emphasises the new look and feel of the factory, which has moved away from traditional metal-forging to high-tech production.

A bright, friendly workplace aids concentration and safeguards high quality manufacturing standards. This is especially important because Lemgo is a manufacturing site for advanced LED light sources. The proportion of LED products in Zumtobel's overall product range is expected to grow from 10% to 40% within the next few years. Production of the Panos Infinity downlight range and the Discus spotlight system started at Lemgo a short time ago.



B2 | Improved lighting quality, less energy: the Tecton continuous-row lighting systems are controlled via an intelligent lighting management system. In this way, just enough artificial lighting is added to provide the optimum illuminance level of 500 lux required. The daylight-based lighting system saves up to 50% of energy.



B3 | With a reflectance of some 40%, the redesigned bright floors and walls make it possible to achieve a further 15% energy saving.

More information:



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