

Press release  
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## **From metal-forging to high-tech manufacturing Facts about the renovation of Zumtobel's Lemgo factory**



BO I Process flows were optimised at the same time as the factory renovation, and this has boosted employee productivity significantly. Good job quality has also been enhanced by intelligent daylight-based control, which ensures constant luminance and 50% energy savings.

The extensive modernisation work at Zumtobel's luminaire factory in Lemgo took 12 months. Upgrading the plant to a factory of the future has not only enhanced the job quality of around 500 employees. Optimised process flows have provided a significant improvement in productivity, and the plant's energy consumption has been cut by approximately 50%. Two new LED product ranges are already being manufactured in this modern industrial facility: the Panos downlight range and the Discus spotlight system.

Walter Metzen, Manager of Zumtobel's Lemgo factory, is proud of the conversion: „By renovating the factory, we have strengthened Zumtobel's expertise in manufacturing advanced high-quality innovative LED products. At the same time, we are safeguarding jobs in the region and creating a positive working environment that offers the best possible career development prospects for our employees. Producing innovative products efficiently is the best

way of protecting jobs. The fact that we have managed to reduce our energy consumption by almost 50% at the same time fully reflects our holistic planning approach. The renovation is a win-win situation for everyone: employees, the environment and Zumtobel.“

New requirements placed on modern industry:

- The growing importance of highly intelligent components in the lighting industry places more exacting requirements on new workplaces. The increased complexity of LED products demands appropriately adapted working conditions.
- At the same time, Zumtobel remains aware of its responsibility to the environment, striving to manufacture products in a way that conserves resources.
- The underlying objective when renovating Zumtobel's plants 1 and 2 in Lemgo was to cut long-term energy consumption at the production site by 50% while, at the same time, improving job quality.



Policy and objective: „factory of the future“

- After completion of the successful 12-month renovation project, the production site has been transformed into a factory of the future.
- LED luminaires currently account for roughly 10% of the factory's production.
- The goal is to boost the share of sales accounted for by LED products to 50% of total sales by 2015.

New work processes and a new plant:

- The age of the LED places new requirements on modern structures and workflows:

a) Well-informed employees

- o Approximately 20 factory employees operate as a team to heighten employees' sense of responsibility: skills are evaluated here self-reliantly and deployed in a productivity-focused fashion
- o Numerous advanced training courses given by fully trained instructors impart knowledge and heighten employee awareness.
- o Work processes can be streamlined, and errors can be rectified quickly thanks to sophisticated on-site quality analysis („red bin“).

b) Modern workplace environment: better lighting quality, less energy

- o Natural daylight was exploited to maximum effect by installing extra skylights.
- o This has improved lighting quality and has also cut energy consumption.
- o An external daylight sensor installed on the roof of the factory continuously measures the amount of daylight. The Luxmate Professional lighting management system provides just sufficient artificial light in the production halls (depending on the position of the sun and brightness) to maintain a constant illuminance level of 500 lux.
- o New bright floor and wall coverings instead

of mastic asphalt: walls and floors not only provide a more pleasant ambiance, they also ensure better reflectance. This has made it possible to achieve further energy reductions of approximately 15%.

Results of the conversion:

- New processes make it possible to boost employees' value-adding activities. Such activities have already reached the 80% level - the target is 90%.
- Optimised processes have not led to any job cuts: qualified manpower is needed thanks to more „inhousing“ and a greater range of vertical manufacture. Flexibility, delivery times and quality control during the production of LED products have been significantly improved.
- Optimal working atmosphere
- Constant illuminance of 500 lux, day and night, but 50% less energy consumption thanks to intelligent daylight-based control.
- The intelligent lighting management system also makes it possible to work in harmony with natural biorhythms by, for instance, providing higher illuminance levels after lunch breaks or during night shifts in order to ward off fatigue.

Next steps:

- Further measures are planned to modernise the Lemgo site, including:
  - a) Thermal imaging to measure energy losses from buildings and subsequent modernisation of old windows and facades
  - b) Solar panels on the factory roof installed in cooperation with local public utility companies
- This way, all potential energy savings will be utilised to the full in future.



B1 | The new Discus spotlight system is now also being manufactured in the Lemgo production site for advanced light sources.



B1A | The new Discus LED spotlight system (design: EOOS) is a purist eye catcher with a flat, unobtrusive design that blends into any architecture.



B2 | Modern workplaces for trend-setting products: production of the new Panos Infinity downlight range has already started at the modernised Lemgo plant.



B2A | Panos Infinity combines lighting quality, efficiency and design and takes them to a new level. The efficiency of this luminaire system is currently unrivalled by any other product available on the market.

More information:



Zumtobel GmbH  
Kerstin Schitthelm, Dipl.-Ing.  
PR Manager  
Schweizer Straße 30  
A - 6850 Dornbirn

Tel. +43 (0)5572 390 - 1484  
Fax +43 (0)5572 390 - 91484  
Mobil +43 (0)676 8920 3258  
kerstin.schitthelm@zumtobel.com  
www.zumtobel.com