Sustainability that pays off.

LED technology in the production building – savings potential and investment

NETZSCH

Fully automatic lighting control, night and day

Contact:
NETZSCH Pumpen & Systeme GmbH
Contact: Johann Vetter
Head of Integrated Management Systems
Phone: +49 8638 632076
E-Mail: johann.vetter@netzsch.com
Internet: www.netzsch.com

Changing the lighting in the production building at NETZSCH Pumpen & Systeme GmbH from neon to LED lamps was initially intended to lower energy costs, but – almost as a side effect – also increased the efficiecy of the lighting. The new lighting system can be adjusted individually and allows light to be guided only into the required areas, without having to illuminate entire workshops.

During an energy audit as per EN 16247-1 at NETZSCH in Waldkraiburg in April 2016, it became evident that the change from neon lamps to LED lamps in the production workshop at plant 2 constitutes a savings potential of approx. 45,000 kWh per year. In addition, illuminance measurements in the machining workshop found that evaporating cutting fluids can settle on the reflectors of the lamps. This reduces the illuminance of the lamps over time. As this evaporation was also caused by the heat generated by the neon lamps to a substantial degree, it can now be reduced significantly by using LED lamps.

The new lighting system can, for example, be controlled individually and bring light to those areas that require the corresponding illuminance. In addition, the lighting adjusts itself throughout the day to suit the changing external light situation. On bright, sunny days, the demand for artificial lighting is lower, reducing energy consumption. In the evening and during the night, the additional illuminance increases to provide ideal lighting for the workstations at all times.

The new lighting system was planned in 2017, including a modernisation of the emergency lighting, as the batteries of the old system also needed to be replaced. This change, which was then implemented in 2018, means that the emergency lighting now requires 66% fewer batteries. From a maintenance point of view, another important advantage of the LED lighting is the reduction of the high level of maintenance work from frequent lamp changes and the previously very laborious cleaning of the lamp louvres.

Other sections of the factory will now be successively fitted with a new lighting system.

Facts:

- Savings of 45,000 kWh per year
- Increase of illuminance in the entire production area, approx. 20% more illuminance
- Fully automatic control for the workshop lighting, night and day
- No cleaning of lamp shades required, cost savings of approx. 6000 €/a
- Battery capacity for emergency lighting currently only 33% of previous requirement

BLUECOMPETENCE
Alliance Member