BEVER INNOVATIONS

INDUSTRIAL

CASE STUDY

CLIENT: Upfield

LOCATION: Rotterdam, The Netherlands

PROJECT: Dynamic, food-safe lighting for margarine factory

Upfield™

CASE STUDY

Dynamic, food-safe lighting for margarine factory in Rotterdam

The 125-year-old margarine factory of Upfield SU Nederland BV (formerly: Europe B.V.) on Nassaukade in Rotterdam was recently extended with the Upfield Research & Development Pilot Plant. This new-build accommodates all combined Research & Development activities for Upfield worldwide. The building was constructed and delivered as a turnkey product by D&S Process Solutions, which also took care of the installation engineering. Including the lighting.

'D&S Process Solutions was looking for food-safe luminaries which could also be dynamically controlled. Our LS LED luminaries are the ideal solution in this regard', says the Sales Director at Bever Innovations, Industrial division. 'We supplied LED luminaries for the Pilot Plant, which were built into the ceilings with special mounting frames. Mounting frames that we would ordinarily use in the fuel-retail market. All luminaries are fitted with a special, food-safe kit, resulting in a fully flat ceiling. What's more, the embedded luminaries are shockproof, splinter-free and made of an easy-to-clean material, ensuring they are fully compliant with the HACCP guidelines. Because it's possible to walk on the ceiling, it will be easy for Upfield SU Nederland's service technicians to reach the luminaries and clean them.'

CLEAR, ENERGY-EFFICIENT AND SAFE

'As the Pilot Plant in Rotterdam is a test location, clear light and uniform lighting were imperative', explains Perry Snoeij, Automation & Control Manager at Upfield SU Nederland BV. 'Moreover, there's plenty of daylight ingression in the new-build premises, which made daylight controls desirable.' De Jonge: 'A minimum value of 300 lux was set for the lighting. In the end we supplied luminaries of in excess of 500 lux. The DLS (daylight sensor) has been activated in the luminaries. Furthermore, all the lighting is dynamically controlled. As soon as staff enter the room, the lighting switches on automatically up to a pre-determined light level, taking into account the daylight ingression in the room, the room temperature and the applicable health and safety standards. The lighting subsequently dims again automatically too. Several lamps were selected as emergency lighting and are always on at a minimum light level. The upshot of this being optimum energy-efficient coupled with optimum safety.'

Use of the new premises began mid May. 'Our staff's responses are highly positive', says Snoeij. 'They feel the light is extremely comfortable, and thanks to the motion and daylight sensors, no energy gets wasted anywhere. On sunny days the luminaries are on at just 10-11% of their capacity.'

TEST SET-UP

Following on from this new-build premises, Bever Innovations has also been invited to install various test set-ups in the existing buildings on Nassaukade, where there are various lighting challenges. 'The existing fluorescent lighting has reached the end of its technical lifespan', says De Jonge. 'In addition, Upfield SU Nederland BV is struggling with insufficient levels of light in some spots. Luminaries are frequently failing due to the heat released during the margarine production. What's more, plastic components dry out as time goes by. We put our heads together with Upfield SU Nederland and came up with an alternative lighting solution, in which dynamic controls are also possible. Over the next few weeks we'll start illuminating various platforms, for the purposes of which we'll be using our new CubiQ luminary. We've also been asked to illuminate an entire margarine line.'

NOVELTY: THE CUBIQ LUMINARY

The CubiQ luminary is excellent in areas that are 4 to 5 metres high and as an addition to existing work lighting, says De Jonge. 'CubiQ is easy to regulate from 0 to 9,000 lumens. The luminary operates on just 48 volts and is powered centrally. A single driver can be used to control several units. This is not only a solution for difficult-to-access places, but also for places where high temperatures are encountered. The driver can also be placed elsewhere, which significantly improves the life-span of products.'

Just like the LS LED luminaries, CubiQ luminaries guarantee high colour rendering (CRI 83+) in colour temperature 4,000 kelvins. If the temperature of LEDs on the circuit board exceeds 80°C, the LIPS (Luminary Intelligent Protection System) will automatically be activated to dim the lamp. Thus providing optimum protection for the luminary, without making concessions in terms of its lifespan. 'Every segment of the circuit board is continuously monitored for voltage spikes, short circuits and temperature breaches. In addition, the luminaries feature a Light Normalizer that continuously measures reductions in light output and, if necessary, automatically compensates for them.'

Smart technology from Bever Innovations has been integrated into all CubiQ luminaries, points out De Jonge. 'This intelligent technology means our lighting fixtures automatically form a stand-alone network, which can be easily accessed and managed through the Bever app on a tablet or smartphone. Even remotely. This offers opportunities for improving efficiency, productivity, safety and well-being within the company. This is partly done by making connections to alarm, fire and building management systems, but also by analysing system data. Furthermore, the data analysis presents options in terms of (100%) predictive maintenance.'

Bever Innovations B.V.
Techniekweg 2 | 4301 RT Zierikzee
The Netherlands

Tel +31 111 74 54 00
info@beverinnovations.com
www.beverinnovations.com