

The Benefits of LED Lighting

Spanish manufacturing company Martisa is based in Barcelona where it produces metal parts for the automotive industry.

The Lighting Challenge

With the metal processing machinery pumping so much energy, the 32x400W high pressure sodium (HPS) lights in the 1288 sqm Martisa facility were subject to frequent dimming and flickering, so the management was looking for a more robust lighting solution. The performance instability of the HPS was also generating irregular color rendition areas varying between 118 and 270 lux at floor level.



Further problems arose when the lights took ten minutes to re-strike following power outages. Maintenance was also an issue, as the HPS lights were mounted at a height of 9 meters, ran ten hours a day, five days a week, and had to be replaced every 10,000 hours — each at a unit replacement cost of €50 plus the use of a mobile elevation platform that cost €100 per day.

The Solution

Martisa's energy consultant (Area Energetica, a lighting consulting partner of INELEC distributor) recommended a lighting solution by specialist LED lighting manufacturer Dialight that could meet all of these challenges and deliver substantial energy savings. In order to minimize project cost, they chose to replace the 400W HPS lights on a one-for-one basis with Dialight's highly robust 150W DuroSite® LED High Bays.

The Result

Martisa is now enjoying the immediate benefits of 69 percent reduction in lighting energy use and reduced carbon emissions from solid-state LED High Bays that suffer no flickering or dimming effect from the amount of energy being pumped by the machinery. The lux level is now steady at 200 at floor level, giving improved and consistent color rendition, while the LEDs' instant-on ability means that there is no re-strike delay following power outages. Carrying a 5-year continuous performance warranty and with an expected lifetime of 60,000 hours, the LED lighting has also greatly reduced the maintenance burden and cost.

Mr. Santi Martínez, the manager of Martisa, commented: "Replacing the HPS with Dialight's LED High Bays has eliminated the annoying flickering issue caused by the energy consumption of the machines and we now have the added benefit of instant

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on/off switching that allows more efficient lighting management by reducing the re-



strike time. Our staff now works with a better sense of comfort due to the removal of the lighting fluctuation and we're getting overall homogeneous lighting with improved color rendition across the entire warehouse. The reduction of energy consumption and maintenance fees represent a huge and direct economic saving for the company that also represents significant value."

For more information, please visit www.dialight.com [1].

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