

Press Backgrounder

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Sporting Emotions

City Stadium, Poznan, Poland - The stadium in Poznan was the first football arena completed in Poland to host this summer's major football tournament. The stadium is notable for its dynamic, coloured lighting of the outer façade, using LED lighting systems.

When Michel Platini, president of UEFA, announced in 2007 that the European Championship would take place in Poland and Ukraine, modernization work was already underway at the Poznan stadium. The refurbishment project, which has been proceeding in a number of stages since 2002, has been carried out under the aegis of Polish firm, Modern Construction Systems – a company recognized for its many high-profile projects and unique structures.

The stadium, located in the south-western part of the city near Ławica airport, was built in the early 1980s. Originally, the stadium had been surrounded by an embankment, with stands in the shape of the letter U – opening up to the 'missing' stand. The design of the new stadium envisaged the demolition of the old stands and the construction of four new stands using reinforced concrete to hold 45,594 fans. They are of different lengths - from 130 meters to almost 190 metres - and different heights, from three to five storeys, giving it a complex design.

Architect Wojciech Ryzynski, explains: "The steel roof made it possible to install the highest-quality lighting around the steel platforms where the pitch lights are installed, ensuring it meets all the requirements and produces maximum effect for HDTV."

The owner of the structure is the local authority in Poznan, who enforced the use of energy-saving solutions in the design, in accordance with the sustainable development policy of the city.

Master of the arena

The pitch lighting has five different settings – training, match, emergency, TV broadcast and standard HDTV. The lighting installation has seven optical systems and beam categories ranging from B1 (very narrow angle) to B7 (wide angle). "The solution we proposed enables a better effect to be achieved, by reducing the number of lighting systems and reducing the level of power used in comparison with other systems. The reduced number of projectors required to illuminate the pitch also means a reduction in installation, operating and maintenance costs," said Marek Lasiński, Lighting Application Services Manager for central Europe at Philips Lighting Poland and coordinator of the stadium lighting project in Poznan. To illuminate the pitch, Philips' ArenaVision MVF404 system was used, comprising 300 luminaires at more than 2500 lux, pointing in the direction of the TV cameras.

Façade in colours

During the first lighting tests, it became apparent that the luminescence of the material used for the façade of the stadium was so great that the original LED lighting installation method caused shadows to appear on the surface, impairing the effect of the lighting. "As a result of further tests, an optimal solution was found: the systems were powered from below and set at a distance of 6 to 9 metres from the material," explains Lasiński.

A total of 195 Philips ColorBlast RGB LED projectors, plus a control system and software, were used to illuminate the outer façade of the Poznan stadium, thereby enabling dynamic colour changes. As a result, the Poznan arena is now endowed with the additional ability to evoke and build emotion during sporting events, as well as other entertainment events - such as concerts - taking place in the stadium. Optimistic about the end result, Ryzynski says: "I think that I have succeeded with this project. The stadium is truly atmospheric, producing a really great shadow effect."

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