Press Release

20th April 2017

Power station in change – Illumination of the power station Schwerin South

Schwerin, Germany – The power plant Schwerin South is now presenting itself in a new light during the morning and evening hours. By illuminating the façades, the city wanted to occupy the new biogas plant with positive attributes. The cylindrical and spherical building parts are highlighted with white and colored light. In addition to formal aspects, the prevention of light pollution was also taken into account.



The light divides the power plant in such a way that the geometry of the components, in particular the boiler blocks, can be recognized.

The task to re-illuminate the Schwerin South power station was a challenge in various respects. On the one hand, an economically and formally appealing lighting system was required which respects the flora and fauna of the environment and does not impact it. In addition, a new landmark for Schwerin should be established, with positive effects on the company's image. The municipalities wanted to communicate the changed importance of the facility - away from a fuel oil plant to a clean gas and biogas CHP (Combined heat and power unit). The lighting in the morning and evening hours is used to emphasize the new technology. Formally, the lighting system should structure the power plant in a way that its essential components are distinguishable and the geometry of the system components, in particular the boiler blocks, can be recognized. By examining the town-planning classification, it was possible to illuminate only those parts of the system, which can also be seen from outside the power plant ground. It was an aim to ensure that "postcard images" are built up in the most important viewpoints, which means that the illuminated parts of the system complement each other in a harmonious way. For this purpose,

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daylight shots and sketches were produced from the plant and evaluated accordingly. The lighting design now results in a coherent overall picture.



In addition to the formation of a new image for the Schwerin power station, another challenge of the new lighting was to avoid pollution. This is achieved through the targeted illumination and the use of opal light emission surfaces and a dimming protocol.

In order to reduce the effect on the inhabitants, but also for the insects and birds, the luminaires were arranged in such a way that they do not emit light into the sky, but specifically illuminate the surfaces. Due to the small design of LED luminaires it is possible to adjust the light precisely or to install the luminaires in an appropriate way. The "light smog" is minimized due to the targeted illumination and the use of opal light emission surfaces. In order to further reduce the possible load, a dimming protocol was set which regulates the light according to the time of the day. In the early evening at the brightest, the light is reduced by half in the late evening, then almost completely switched off from midnight. In the morning, the power station welcomes the Schwerin's inhabitants on their way to work with a brighter light again.

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After an examination of the town-planning classification, the requirement was to illuminate only those parts of the system, which can also be seen from outside the power plant terrain.

To make the operation of the power plant transparent, the lighting divides it into different areas. In the entrance area, a narrow white and a blue, 25m-long »VarioLED Flex VENUS« design light line from LED Linear leads to the entrance. At the biogas tanks, the upper third of the three tanks is surrounded by a green light line. The "VarioLED Flex VENUS" was also used here. The light illuminates part of the tank walls and symbolizes the process of gas production.



At the biogas tanks, the upper third of the three tanks is surrounded by the green light line "VarioLED Flex VENUS".

At the power plant, the side walls of the boiler houses are lit from the roof to reveal the structure of the central building, the heart of the plant. The facade of the power plant, which is divided by an external steel structure, thus receives a two-dimensional backlighting. The concise

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lighting solutions

construction is emphasized in the form of a light and shadow contrast and thus appears as a geometrical element in front of the building. The "XOOLUM", a narrow luminaire with 25° reflector optics and IP67 potting, was used here.



The striking external steel structure of the power plant façade is given a twodimensional backlighting with "XOOLUM".

The tops of the four chimneys are illuminated in a ring-shaped fashion, white light upwards and blue light downwards, and thus re-absorbing the colors of the logo of the town. The VarioLED Flex VENUS was used in white and blue. They form a kind of "crown of light" for the power station. The positive, memorable impression of the complex in the evening should be connected with the daylight impression. In this way, the power station will slowly become a new landmark for Schwerin.

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"Crown of light" for the power station: The tops of the four chimneys are illuminated in the form of a ring, upwards white and downwards blue.

Further information: Planning: 2014-2015 Completion: October 2016 Client: Stadtwerke Schwerin

Lighting design: Prof. Dr.-Ing. Thomas Römhild

Luminaires: LED Linear, Neukirchen-Vluyn, www.led-linear.com

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