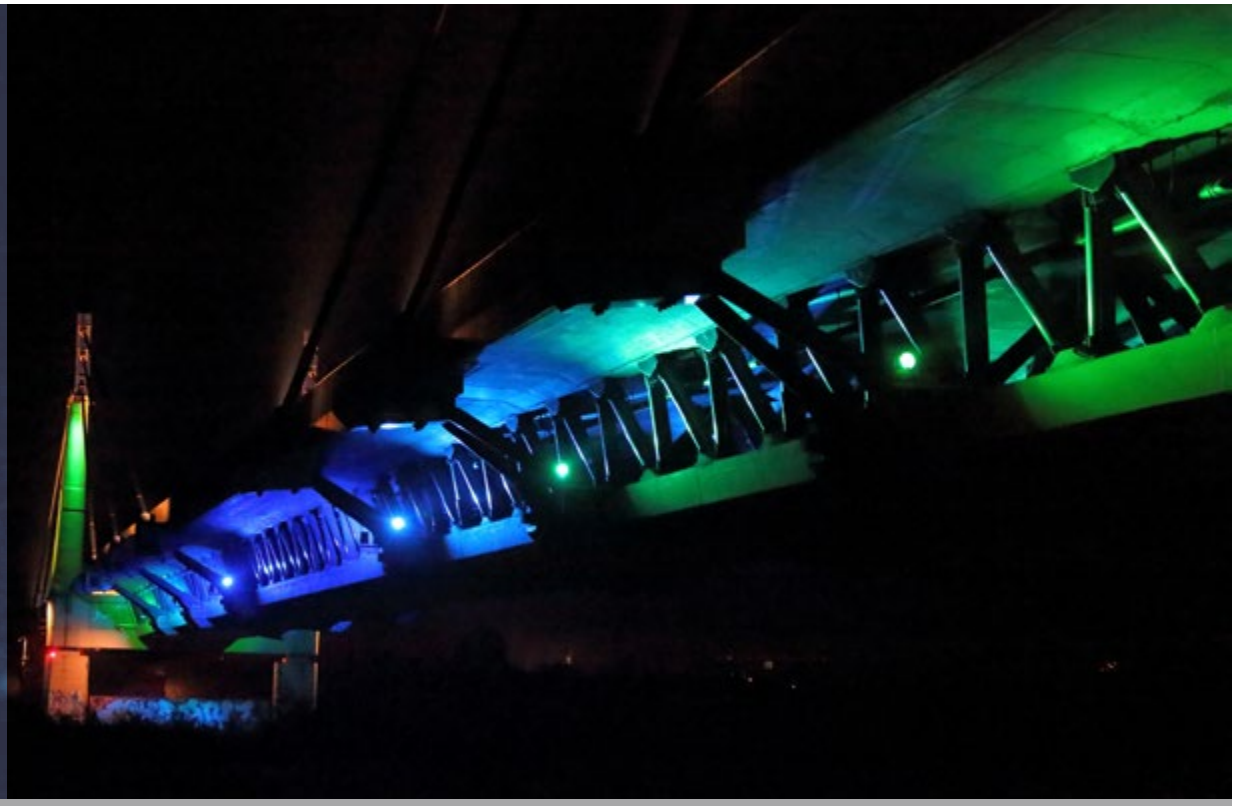

ST. KINGA'S BRIDGE | STARY SĄCZ | POLAND

Aside from their basic communicational role, bridges also fulfill a number of other functions. The historic structures can be a tourist attraction or even a symbol of a city, and the contemporary designs certainly shape their surrounding landscape and give it a unique character. This was the objective of the Board of Regional Roads, which commissioned the project of the illumination of St. Kinga's Bridge in Stary Sącz.

THE SITUATION

St. Kinga's Bridge in Stary Sącz was built in 2006-2008 and is a crossing over the Dunajec river. A characteristic feature of its construction lies in its four high pylons with shrouds attached to them in a fan-shaped manner. The designer of the bridge, Tadeusz Wojciechowski, used a construction technique which had been unprecedented in Poland at the time, but had already gained popularity in Japan. The construction's uniqueness was duly appreciated by the Chapter of the Association of Bridge Engineers of the Republic of Poland, which named the project the „Bridge Masterpiece of the year 2008".

THE CHALLENGE

A few years after the construction had been completed, the Board of Regional Roads decided to provide the bridge with an illumination in order to increase the safety of the users and emphasize the slender shape of the structure. The contractor, a company called EL-EN, asked its long-term, trusted business partner ES-SYSTEM to work on it together.

The designer of the illumination, architect Mirosław Sulma decided to use luminaires with LED light sources because of their energy-saving potential, as well as the products' resistance to the bridge's vibrations. Moreover, using luminaires with LED technology makes it possible to adjust the luminous flux within a range of 0–100% and to program dynamically changing RGB color scenes.
In order to accurately determine the placement of the floodlights which would illuminate the individual elements of the bridge and verify the used light distribution variants, an illumination trial was performed directly on the bridge's structure.

THE PROJECT

The result was a uniform illumination of the bridge's abutments, pillars, spans and pylons with warm, white light. Once an hour, a programmed, dynamically variable animation is played, which changes the bridge's calm white illumination into a lively play of colorful light and form. The safety the lighting installation has provided is also worth noting. As part of this investment, the nearby pedestrian crossing and intersection were also illuminated.

The official inauguration of the new illumination was held on December 12 at 5 PM, when St. Kinga's Bridge flashed with colorful lights before the eyes of city authorities and the residents of Stary Sącz. Since that time, the connecting point on the regional road no. 969 is not only a communication route, but also a symbol and characteristic feature of this Małopolska town located in the beautiful Sącz Basin.

It's the most important communication route in the Nowy and Stary Sącz area. 12 to 14 thousand cars drive through it every day. Now the bridge will not only be more beautiful, it will also be safer.

Janusz Klag,
Head of the Board of Regional Roads in Nowy Sącz

Bridge length:

328.8 m

120

LED floodlights

Total maximum floodlight power:

8.4 kW

Cable length:

3 km

PROJECT SUMMARY

Project name:	**ST. KINGA'S BRIDGE**
Investor:	Board of Regional Roads
Contractor:	Towarzystwo Wykonawstwa Obiektów Elektroenergetycznych EL-EN
Location:	Stary Sącz, Poland
Project starting date:	01.06.2016
Project completion date:	12.12.2016
Product:	LEDPIPE 2, DELTA LED
Product features:	120 LED floodlights Total maximum floodlight power: 8.4 kW
Bridge designer:	Tadeusz Wojciechowski, Eng.
Illumination designer:	ES-SYSTEM S.A., Mirosław Sulma, PhD., Eng. Jan Wachacki, MSc., Eng. Piotr Kapuściński, MSc., Eng.