Architecture as a mirror image of the Alps

Builder-owner: City of Innsbruck/STRABAG
Architects: Zaha Hadid Architects, London
Light planning: Zaha Hadid Architects, London
Zumtobel Lighting
Electrical planning: ILF, Rum
Electrical installation: EAE Stöckl GmbH, Innsbruck
Get away from it all, up into the mountains in no time. What could be better?

For residents of Innsbruck, the capital of Tyrol, and its visitors, this is not just a utopian dream but thanks to the Hungerburg railway has been a reality for over a century. The first railway connection from Innsbruck to Hungerburg was already in operation in 1906 but did not run as far as the city centre. The construction of a new railway was decided in 2003. Since December 1st 2007, passengers can now travel from the city centre directly and get out at Hungerburg’s alpine station in just under eight minutes. There are four stops on the way up, starting at the congress centre, just a walk away from the Little Golden Roof.

The »Congress« station and the second station »Löwenhaus« are connected by a tunnel. After that, the train emerges from underground to travel over a bridge across the River Inn. It travels onwards following the river bank, through the Weiherburg tunnel to stop at »Alpenzoo« and finally to the 857 metre high alpine station »Hungerburg«.

If you wish to continue your journey, you can always take the Nordketten cable car as far as alpine station »Hafelekar« at an altitude of 2,256 metres.
All four stations and the bridge over the Inn were planned by Zaha Hadid and bear the unmistakable mark of this star architect. Despite the originality of each of the structures, they clearly relate to each other with their expressive, organic architecture. The stations are defined by their dynamic flowing shape. Light-coloured, exposed concrete bases support the hybrid, computer-generated roof structures which surround the tracks in their unique way, and push through the alpine landscape like moving snow or glacier tongues. Thermoformed glass surfaces, painted inside, are installed on the basic steel frame structure. The originality of these building sculptures is enhanced even more so at night when brilliance, material and unique shape are highlighted by indirect
lighting with in-ground floodlights. The largest and architecturally most exciting of the four stations is the Hungerburg alpine station.

A striking concrete structure in the form of a viewing platform thrusts out of the mountain and boldly projects over the abyss. The unique shape of the roof structure is particularly impressive, and reminiscent of the two outstretched wings of a bird about to take flight across the sky.

The entire roof structures of the stations are illuminated by in-ground floodlights. The light reflected from the glass surfaces generates the required basic lighting. The luminaires are installed in the traffic areas below in quite different ways. Lighting solutions had to consider installations in both level and sloping ground surfaces or in steps. Apart from being able to adjust the light aperture angles, other important factors in solving this task were the installation depths of the luminaires and skid-blocking property of the glass. BEGA’s range of in-ground luminaires provided the technology to meet these requirements. A complete overview of our in-ground luminaires including technical data is given on pages 302 - 315 of our Main Catalogue.
The light reflected by the glass surfaces of the roof structure creates very uniform base lighting. The requisite safety illuminance for public spaces is achieved by a combination of direct lighting components. Shielded recessed floodlights installed in walls near ground level illuminate the traffic areas. The asymmetrical light distribution of the floodlights is especially suitable for in-depth illumination of these surfaces. The luminaires are characterized by their high level of efficiency and glare-free properties. At the same time, they are reference points and structure the space. Available in five sizes with different light outputs, the design of the floodlights is in perfect harmony with the architectural dimension and installation situation.

The light effect of the stations was already considered during the planning stage. All in-ground and recessed wall luminaires are set in the concrete structure and are therefore an integral part of the architecture. This connects the four stations together not only in terms of shape but also light design. The presentation of the roofs as structures of light with a long-distance effect fuses them into one element despite the distance they are set apart. A complete overview of the illustrated recessed luminaires including technical data is given on pages 14 - 15 of the BEGA Main Catalogue.
The cable-stayed suspension bridge over the Inn also bears the mark of Zaha Hadid. The bridge pylons are massive, taking up the sculptural shape of the stations and placing the structures in a clear context. Illumination of the 242 metre long cable-stayed suspension bridge underlines the dynamics of the railway track which winds its way like a floating light band over the Inn and through the pylons. The 30 metre high bridge pylons strikingly accentuate the cityscape by day and by night. Illumination with power floodlights particularly emphasizes their special shape and inclination.

Depending on the requirements of the location, these floodlights can be equipped with very narrow beam, narrow beam, wide beam or flat beam light distribution. The luminaires are operated with discharge lamps of 50 to 2000W. Three sizes with different light outputs ranging from 6500 to 200 000 lumen are available to meet the diverse dimensions of the illuminated objects. Shields, inside louvres, dichroic colour effect filters in green, blue or yellow are supplied as accessories. These accessories can be used singly or in combination. A wide range of accessories is also available to install the floodlights reliably on pillars, walls, bases, luminaire poles and support structures.

The complete programme including all technical data is given on pages 266 - 271 of the BEGA Main Catalogue.

The lighting concept of the Hungerburg railway reflects aspects of its natural surroundings and incorporates them in the cityscape at night. A distinctive ambience of light gives the stations and bridge their very own identity and Innsbruck another sightseeing landmark.