

THE “PICCARD BRIDGE” IN OBERGURGL, AUSTRIA

Authors: Rudolf BRANDSTÖTTER

Affiliation: tragwerkstatt Ziviltechniker gmbh, Salzburg, Austria, brandstoetter@tragwerkstatt.at

Summary

The new stress ribbon bridge in Obergurgl, Austria with a span of 137,20 m is not another alpine attraction. In fact it became necessary to keep up the link between two alpine huts. The existing hiking trail was not passable anymore because of the strong glacier meltdown in the last decades. The location was chosen carefully in respect to the environmental impact. Therefore the bridge is located at the end of the valley at a height of app. 2.500 m above sea, to make it invisible from the valley entrance.

The bridge construction during the short summer season at this high alpine surroundings was a great challenge for the designers and executors. The site can only be reached by foot or helicopter, so every part was delivered by helicopter and the workers had to enjoy a one hour footwalk twice a day.

The load bearing structure itself is minimized to keep the transport weight and number of flights low. Therefore the bridge has no stiffening girder in the longitudinal direction. The steel grating which acts as walkway is clamped directly onto the lower main cables. The superstructure is formed by six main cables and 27 steel frames every 5,0 m. The steel frames are necessary to obtain the intended cross section and to avoid uncontrolled contact in between the cables. Due to the minimized amount of structural elements the structure provides a high transparency appearance (s. Fig.1). The main construction period was in summer of 2016, followed by the completion and inauguration in summer of 2017. The bridge is open to public during the summer season. During winter the bridge is closed due to the extensive danger of avalanches.



Fig. 1. The nearly invisible “Piccard Bridge” in the Austrian Alps, Photo: B+B-Bau

Keywords: Stress ribbon bridge; structural concepts; detail planning; high alpine construction.