

Mauves sur Loire bridge



Location: Mauves sur Loire, France

Date: 2020

Architect or contractor: Bouygues TPRF

Solution and technologies: Infrastructure

Introduction

The rehabilitation of Mauves-sur-Loire bridge consists in substituting the existing deck (3,500 m²) made of brick vaults with a thin deck made of thin precast UHPFRC slabs. The main objective of the project is to upgrade this historic landmark by increasing its bearing capacity and allowing the addition of cantilevered footbridges.

Challenge

This technical challenge was met with the use of Ductal® Infrastructure and the implementation of lightweight precast slabs (with an average thickness of 10 cm), which will reduce the total dead load of the bridge by 50%. In this project, the fibers used were 14 mm/ 0.2 mm steel brass coated.

Optimization

The UHPFRC precast elements were produced at the Delta Prefabrication plant located in Privas (France). Assisted by the Ductal LafargeHolcim technical team, Delta Prefabrication has mastered the several challenges of the project by strictly following the UHPFRC French Standards (NF P18-470 / NF P18-710 / NF P18-451) during the suitability test and then during production control. Particular methods and additional rebar were implemented in order to increase the bonding in the joints between the slabs. Bouygues TPRF/VSL, the general contractor in charge of the project, is responsible for the slab installation and their connection to the structure. The latter was done by in-situ casting the Ductal joint fill solution.

The project was completed in November 2020.

