

Iron Gate 1 Navigation Lock

Client:

Ministry of Construction, Transport and Infrastructure

Country:

Serbia

Duration:

From March 2018 to May 2023

Services:

Site supervision under FIDIC Yellow Book

Project objectives

The Iron Gate 1 navigation lock is located on the Rhine – Danube Corridor of the Trans-European Transport Network and represents the backbone component of the navigation infrastructure on the lower Danube. An increase in maintenance costs and a decrease in operational reliability have led the government to launch an upgrade of the lock system in order to ensure safe, reliable and environmentally friendly transportation of freight and passengers.

Project description

The Hydropower and Navigation System Iron Gate 1 consists of a dam with two power plants and two double-stage navigation locks on the Serbian and the Romanian banks of the Danube River at river km 943. The complete upgrade of the Serbian lock on the right bank concerns all essential lock system facilities and components like the control tower, engine rooms, ducts, docks, gates, drives, cranes, lighting-, signalisation-, information- and management systems.

Project data

The dam height of 35 m is overcome by shipping via two lock chambers of 310 m length and 34 m width on both river banks. The Serbian lock system on the right bank has a length of about two kilometres, whereas the procedures for the passing of vessels stretch for about eight kilometres. The Iron Gate 1 lock system is the largest such system on the Danube.

Project specifics

The lock closure, which is limited to one year, poses a particular challenge for the construction process. Although the planning was preceded by comprehensive investigations of the existing lock system, a rehabilitation of an existing system always involves the risk of unforeseen hindrances or additional measures. Therefore, great attention is paid to the control of deadlines and the timely execution of the individual work steps.

Services

Supervision of works in the role of the Engineer under FIDIC Yellow Book and according to the Serbian regulations for construction supervision.

