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**MOMCHILGRAD-SEDLARE PEDESTRIAN SUSPENSION
BRIDGE**

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ABSTRACT

This article reviews the new superstructure and cable system for the pedestrian suspension bridge over Varbitza river, situated in Rodopi mountain of Bulgaria. The bridge connects the town of Momchilgrad with the village of Sedlare, bridging the river in a single span. The distance between the two concrete pylons is 169m. The span of the main steel truss girders is 155m with a clear distance between them of 2,50m. The design was made in 2005 and the bridge was constructed in 2007. In 2021 (nearly fifteen years after its completion) side inspection of its service condition was made by the authors. The results of the findings are discussed in this article as well.

Keywords: human induced vibrations; reconstruction; service condition; detailing.

1 INTRODUCTION

The project for the reconstruction of the existing suspension bridge, between the town of Momchilgrad and the village of Sedlare, over the Varbitza river, was initiated by the Municipality of Momchilgrad in 2005. The existing superstructure was in a very bad condition (Figure 1) and needed replacement. The project also included strengthening of the concrete pylons and one-sided concrete ramp as well as the design of new anchor blocks for the main cables.



Figure 1: Bridge superstructure before the reconstruction