

DEMOLITION OF REINFORCED CONCRETE BRIDGES DURING RECONSTRUCTION OF THE MOTORWAY ZAGREB-KRAPINA

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Abstract

During the reconstruction of the motorway Zagreb-Krapina three reinforced concrete bridges were demolished, for their width was not adequate for the new motorway. Demolition of the three bridges was carried out by blasting as duration of the traffic cut on the motorway and the railway was limited to maximally 4 hours. During that period of time the demolished bridges had to be removed. Therefore, very tiny granulation was requested suitable for loading and not endangering the surrounding structures. Before each of three main blasting, trial blasting were carried out including the seismic measurements registering the seismic effects. The nearest residential building was at the distance of less than 30 m from the place of blasting. Additional difficulty was the fact that by each of the three bridges there is a new bridge, with minimal distance between the old and the new bridge being 30 cm. As each of the bridges is of different construction and of various thickness, particular blasting technique has been prepared for each one of the bridges.