

Research and Application of a Comprehensive Solution for the Demolition and Reconstruction of Trussed Combination Arch Bridge

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ABSTRACT

Based on the analysis of the current technology of trussed combination arch bridge and its future operational demand, taking into consideration of the cantilever erection technology and the general idea of "reverse assembly", a project solution called "integration of demolition and construction" has been developed. Using the finite element analysis of the demolition process, the structuring of the new and old bridges and the safety of their construction will be effectively ensured. In order to verify the rationality and accuracy of the theoretical calculation model and the value of the structural deterioration parameters, the displacement of each node at every stage of the demolition process will be monitored and compared with the results of the theoretical calculation .