عنوان مقاله:

Assessment of Al-Sabtea Bridge under the Effects of Static Loadings

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خلاصه مقاله:

The behavior and strength of composite for composite bridges relay on the connectors that used to connect the steel beams or girders with reinforced concrete deck slab. Different type of shear connectors that available in the market such as headed stud or steel channels are commonly welded to the top face of the steel section to prevent slip at the interface between the two different materials. In present paper, existing composite bridge built in Iraq is modelled using finite elements approach by ANSYS. The bridge is simulate by adopt real dimensions and geometry to check out the performance of connectors and strengths of composite girder under worst static loading conditions proposed by general Iraqi Standard Specification for Road and Bridges such as track, knife and military loadings. The analysis results indicate that the three types applied loading show that all stresses within the acceptable limits and did not reach high values compared capacities of these materials according to the AASHTO ASD code. The maximum stress .at bottom face of steel girder is ۱۱۴.۷ MPa and the maximum deflection is ۵۹ mm these values within limits of code

کلمات کلیدی:

ANSYS; Finite Element; Composite Steel-Concrete Girder; Shear Connector