

## EFFECTS OF KYE PROPERTIES, SHAPE AND LOCATIONS ON REINFORCED CONCRETE ARCHES BEHAVIOR

WALEED. A. WARYOSH<sup>1</sup> & ENG. SHAIMA SABRI ALI<sup>2</sup>

<sup>1</sup>Assistant Professor, Department of Civil Engineering, Al-Mustansiriayah University, Baghdad, Iraq

<sup>2</sup>Research Scholar, Department of Civil Engineering, Al-Mustansiriayah University, Baghdad, Iraq

### ABSTRACT

*An arch defined as a curved girder having convexity upwards and supported at its ends. The shape of the arch may be circular, elliptical or parabolic and sometimes it is made up by circular arcs of several and different radii or/and centers. It may be subjected to in- plane vertical, horizontal or even inclined loads. The arch carries compression loads, not tensile loads while the horizontal beam sustained tension and compression loads. In present experimental tests, five reinforced concrete arches are adopted and tested under central static loadings. The arches are different in compressive strength of flange and web, amounts of stirrups and the key connection configurations for the T – section reinforced concrete arches. The tests results showed that the presence of the CFRP not enough to re-strength of the reinforced concrete arch but need to extend the main reinforcements to the other segmental parts.*

**KEYWORDS:** Reinforced Concrete Arches, Compressive Strength, Partial Interaction & Stirrups

**Received:** Mar 04, 2018; **Accepted:** Mar 24, 2018; **Published:** Apr 27, 2018; **Paper Id.:** IJCSEIERDJUN20181