

EFFECT OF HOOPS AND COLUMN AXIAL LOAD ON SHEAR STRENGTH OF HIGH-STRENGTH FIBER REINFORCED BEAM-COLUMN JOINTS

Jamal A. Farhan Zaid Al-Azzawi

Abstract

A reinforced concrete frame is referred as "RIGID FRAMES". However, researches indicate that the Beam-Column joint (BCJ) is definitely not rigid. In addition, extensive research shows that failure may occur at the joint instead of in the beam or the column. Joint failure is known to be a catastrophic type which is difficult to repair. This study was carried out to investigate the effect of hoops and column axial load on the shear strength of high-strength fiber reinforced Beam-Column Joints by using a numerical model based on finite element method using computer program ANSYS (Version 11.0). The variables are: diameter of hoops and magnitude of column axial load. The theoretical results obtained from ANSYS program are in a good agreement with previous experimental results