



SDI Review Form 1.6

Journal Name:	Advances in Research
Manuscript Number:	Ms_AIR_30352
Title of the Manuscript:	REPAIR AND STRENGTHENING OF R.C FLAT SLAB CONNECTION WITH EDGE COLUMNS AGAINST PUNCHING SHEAR
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	1. Methodology: This paper presents the efficiency of using Fiber Reinforced Polymers (FRP) systems to strengthen and repair the flat slab-edge column connections subjected to punching shear. How this paper presents the efficiency?? I believe that you verify the efficiency. Rephrase. 2. Abstract: The calculated ultimate loads based on ACI 440 procedures were higher than the experimental results by 36 to 66%. The experimental results must be higher than the code-stipulated results because the code presents design value. There is something wrong in the calculated value by the ACI 440. Check. 3. Line 28, flat slab....Punctuation marks correction. 4. For journal paper, 8 references are very few. You have to enrich your paper by more references especially there are many references about punching and strengthening of flat slab-to-column connection using different techniques. 5. You mentioned that you used half scale model. That means the regular slab thickness is 260 mm?? explain 6. For repaired specimens, you have to test the specimens up to 0.75 Pmax as you mentioned then penetrate the slab and apply the external stirrups. However, you make the holes and then tested after making weak points and after that apply the strengthening material?? Provide rational.	



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	7. Did you cast all specimens in the same day and then tested them in the same day??. If not, you have to measure the concrete strength in the same testing day because it is an important parameter in model or code equation. Even though, I do not know the actual concrete strength at testing day, because it cannot be 250 kg/cmm². 8. What are the material properties of the epoxy resin for both CFRP and GFRP materials as well as the steel bars? 9. Line 295, what do you means by rigidity of the slab??? 10. Explain, why the ultimate capacity of repaired specimens are higher than the opponent strengthened specimens. Illogical, explain or correct?? 11. Line 375, what is the ductility you are talking about??? Is the ductility equal the ratio between ultimate load and the cracking load? Provide references???The cracking load for flexure of punching shear, explain. 12. I did not notice any value for the deflection and cracking load for the preloading stage of the repaired slabs. 13. For analytical model, s is the spacing between rows. Hoe you use it for only one row??? 14. There is no difference between the calculated value of shear resistance in case of strengthened or repair slabs?? Explain. 15. Conclusions: Is the following a conclusion of your research : Flat slabs column connections have a major weakness, namely vulnerability to punching shear failure even if they are shear-reinforced.	
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<u>Minor</u> REVISION comments	1. The abstract has to be one paragraph without internal subheadings. 2. Three specimens strengthened with one external row of stirrups made from Glass Fiber Reinforced Polymer (GFRP), Carbon Fiber Reinforced Polymer (CFRP), steel links, respectively. Three specimens strengthened with two external rows of stirrups made from (GFRP), (CFRP), steel links, respectively. Three specimens repaired with one external row of stirrups made from (GFRP), (CFRP), steel links, respectively. Three specimens repaired with two external rows of stirrups made from Glass (GFRP), (CFRP), steel links, respectively. These four sentences could be reduced into two sentences, rephrase. 3. The introduction is very compacted. It has to be more comprehensive and includes different strengthening techniques and the motivation of the current work. 4. Use equation editor to write the equations.	
<u>Optional/General</u> comments		

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