

### Review Form 3

Journal Name:	<a href="#">Journal of Engineering Research and Reports</a>
Manuscript Number:	Ms_JERR_129806
Title of the Manuscript:	<b>Research on the Practice of Large-span Prestressed Concrete Beam Construction Technology in Housing Construction</b>
Type of the Article	

#### **General guidelines for the 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 guidelines for the Peer Review process, reviewers are requested to visit this link:

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**PART 1: Comments**

	Reviewer's comment	Author's Feedback (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p><b>Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.</b></p>	<p>This manuscript is significant for the scientific community as it addresses critical advancements in the construction technology of large-span prestressed concrete beams, a structural form widely used in modern buildings. By integrating innovative techniques such as intelligent tension systems, high-performance concrete mix designs, and BIM applications, the study offers practical insights for improving construction efficiency, safety, and sustainability. Furthermore, the emphasis on green construction and prefabrication aligns with the global trend toward environmentally responsible building practices. The findings not only provide a valuable reference for similar projects but also contribute to the ongoing development of high-quality construction standards and methodologies.</p>	
<p><b>Is the title of the article suitable? (If not please suggest an alternative title)</b></p>	<p>Suggested Alternative: "Review on the Practice of Large-span Prestressed Concrete Beam Construction Technology in Housing Construction"</p>	
<p><b>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</b></p>	<p>Adding quantifiable results would strengthen the abstract. The abstract could briefly touch on the broader implications of the findings for the construction industry, such as their contribution to sustainable building practices or potential for widespread application.</p>	
<p><b>Is the manuscript scientifically, correct? Please write here.</b></p>	<p>The article is more of a review (review) article because it systematically introduces existing construction technologies, especially key approaches to the application of wide-ranging prestressed concrete rays, and innovative technologies. However, the current literature list and the content presented are not broad enough for a fully comprehensive education of the field. Recommend that authors conduct a broader literary study on the subject and include other current studies, including international sources. This will enhance the scientific value of the article by providing a comparative analysis of existing technologies and offer readers a broader perspective. So the article may be seen as a stronger review study.</p>	
<p><b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b></p>	<p>The introduction of the paper should be expanded detailly comparison by the study of articles under different subheadings like below.</p> <ol style="list-style-type: none"> <li><b>1. Technological Advancements in Prestressed Concrete Construction</b> <ul style="list-style-type: none"> <li>• Bonopera, Marco, Kuo-Chun Chang, and Zheng-Kuan Lee. "State-of-the-art review on determining prestress losses in prestressed concrete girders." <i>Applied Sciences</i> 10.20 (2020): 7257.</li> <li>• Reichenbach, Sara, and Benjamin Kromoser. "State of practice of automation in precast concrete production." <i>Journal of Building Engineering</i> 43 (2021): 102527.</li> <li>• Bashirzade, Seymour, Okan Ozcan, and Izzet Ufuk Cagdas. "Internal force transfer in segmental RC structures." <i>Research on Engineering Structures &amp; Materials</i> (2024).</li> <li>• O'Hegarty, Richard, and Oliver Kinnane. "Review of precast concrete sandwich panels and their innovations." <i>Construction and building materials</i> 233 (2020): 117145.</li> <li>• Nie, Jianguo, et al. "Technological development and engineering applications of novel steel-concrete composite structures." <i>Frontiers of Structural and Civil Engineering</i> 13 (2019): 1-14.</li> </ul> </li> <li><b>2. Applications of Prestressed Concrete in Modern Construction</b> <ul style="list-style-type: none"> <li>• Sanabra Loewe, Marc, and Joaquim Capellà Llovera. "The four ages of early prestressed concrete structures." <i>PCI Journal</i> 59.4 (2014): 93-121.</li> <li>• Reichenbach, Sara, and Benjamin Kromoser. "State of practice of automation in precast concrete production." <i>Journal of Building Engineering</i> 43 (2021): 102527.</li> <li>• Munbua, Wichuda, et al. "Conceptual Design of a Prestressed Concrete Spar Floater Supporting a 10 MW Offshore Wind Turbine." <i>International Conference on Offshore Mechanics and Arctic Engineering</i>. Vol. 85932. American Society of Mechanical</li> </ul> </li> </ol>	

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	<p>Engineers, 2022.</p> <ul style="list-style-type: none"> <li>• Bashirzade, Seymour, and Rafail Garibov. "Comparative Study of the Advantages and Disadvantages of Prestressed and non-Prestressed Concrete Structures for Offshore Applications."</li> <li>• Gowda, Chandan C., et al. "Numerical analyses of the connections between representative SFRC prestressed rings of off-shore wind towers." Proceedings of the 3rd RILEM Spring Convention and Conference (RSCC 2020) Volume 2: New Materials and Structures for Ultra-durability 3. Springer International Publishing, 2021.</li> </ul> <p><b>3. Analyses of prestressed structures</b></p> <ul style="list-style-type: none"> <li>• Argyris, John H., and Dieter W. Scharpf. "Large deflection analysis of prestressed networks." <i>Journal of the Structural Division</i> 98.3 (1972): 633-654.</li> <li>• Kang, Young-Jin, and Alexander C. Scordelis. "Nonlinear analysis of prestressed concrete frames." <i>Journal of the structural division</i> 106.2 (1980): 445-462.</li> <li>• Seymour, Bashirzade, and Ozcan Okan. "Assessment Of Circular Prestressing Impact On Condeep Platform Storage Reservoirs Via Mechanical Principles." <i>Эксперт: теория и практика</i> 4 (23) (2023): 29-35.</li> <li>• Mang, Herbert A., and Günther Meschke. "Nonlinear finite element analysis of reinforced and prestressed concrete structures." <i>Engineering Structures</i> 13.2 (1991): 211-226.</li> </ul> <p><b>4.</b></p>	
<p><b>Is the language/English quality of the article suitable for scholarly communications?</b></p>	<p>Overall, while the article is suitable for scholarly communication, addressing issues will ensure it meets the highest standards for academic writing. For example, Original: "Large-span prestressed concrete beam is a structural form widely used in modern buildings, and the rationality of its construction technology is directly related to the engineering quality and safety." Suggested: "Large-span prestressed concrete beams are widely used in modern buildings, where effective construction techniques are critical to ensuring quality and safety."</p>	
<p><b>Optional/General</b> comments</p>	<p>The manuscript addresses a critical topic in modern construction engineering. This makes it highly relevant to both the academic and professional engineering communities. The referenced studies provide a foundation for the manuscript, but the scope of the literature review could be expanded to include more recent and diverse sources, particularly from international research. Overall, the manuscript has the potential to make a meaningful contribution to the field, but refining its depth, clarity, and presentation will significantly enhance its impact.</p>	

**PART 2:**

	<p><b>Reviewer's comment</b></p>	<p><b>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)</b></p>
<p><b>Are there ethical issues in this manuscript?</b></p>	<p><b>(If yes, Kindly please write down the ethical issues here in details)</b></p>	

**Reviewer Details:**

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<p><b>Department, University &amp; Country</b></p>	<p>Azerbaijan University Architecture and Construction, Azerbaijan</p>