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| Journal Name: | [**Advances in Research**](https://journalair.com/index.php/AIR) |
| Manuscript Number: | **Ms\_AIR\_131432** |
| Title of the Manuscript: | **Review of research on effects of steam curing on concrete properties** |
| Type of the Article |  |

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| **PART 1: Comments** | | |
|  |  | **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)* |
| **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.** | **Reviewer’s comment**  **First: The summary of this manuscript, as it stands, is poor and lacks principles for writing abstract of manuscripts. The summary should be rewritten according to the following points:**   1. **Research background (research problem, justifications and importance)** 2. **Research objectives (the main objective of the research)** 3. **Research methodology (means, techniques, and methods)** 4. **Research results (reviewing the new results reached by the researcher and the language of numbers)** 5. **The most important conclusions second: references** 6. **The number of references is little and not sufficient** 7. **The style of his written references is incorrect; the researcher must follow a APA style.** 8. **Some references are very old, and this contradicts solid scientific research,** 9. **Must be added the following references in order to improvement the methodology of the manuscript.**    1. Al-Zwainy, F., & Al-Marsomi, M. (2023). Structural equation modeling of critical success factors in the programs of development regional. Journal of Project Management, 8(2), 119-132. 10. Risan, H. K., Serhan, F. M., & Al-Azzawi, A. A. (2024, January). Management of a typical experiment in engineering and science. In AIP Conference Proceedings (Vol. 2864, No. 1). AIP Publishing. 11. Hussein, S. G., & Al-Zwainy, F. M. (2024). Diagnosing and Identifying Standards Affecting on the Ready-Mix Concrete Production Plants Performance: An Analytical Study. *Tikrit Journal of Engineering Sciences*, *31*(1), 211-222. 12. Al-Zwainy, F., Saad, A., & Saady, A. (2024). Systematic Literature Review of The Impact of Project Management Offices In Developing The Construction Sector. *Journal of Al-Azhar University Engineering Sector*, *19*(70), 265-273. 13. Hussien, S. G., Al-Zwainy, F. M., & Manogaran, G. (2023). Critical Review to Evaluate Performance of Ready-Mix Concrete Production Plant. *Al-Nahrain Journal for Engineering Sciences*, *26*(3). 14. Sarhan, M. M., & Al-Zwainy, F. M. (2022, October). Analytical investigations of concrete beams reinforced with FRP bars under static loads. In *Structures* (Vol. 44, pp. 152-158). Elsevier.   h) Al-Nasar, M. K. R., & Al-Zwainy, F. M. S. (2022). A systematic review of structural materials health monitoring system for girder-type bridges. *Materials Today: Proceedings*, *49*, A19-A28.  g) Al-Zwainy, F. M., Salih, S. A., & Aldikheeli, M. R. (2021). Prediction of residual strength of sustainable self-consolidating concrete exposed to elevated temperature using artificial intelligent technique. *International Journal of Applied Science and Engineering*, *18*(2), 1-15.   1. Habeeb, M., Al-Azzawi, A. A., & Al-Zwainy, F. M. (2021). Punching shear behavior of LWA bubble deck slab with different types of shear reinforcement. *Journal of King Saud University-Engineering Sciences*, *33*(1), 15-22. 2. Al-Azzawi, A. A. (2019, August). Punching shear behaviour of solid and bubble reinforced light Weight aggregate concrete two-way slabs. In *IOP Conference Series: Materials Science and*   *Engineering* (Vol. 584, No. 1, p. 012013). IOP Publishing.  thanks | Abstracts and literature formats have been changed：  **Abstract：**Steam curing is a method used to increase the strength of concrete at an early stage. Steam curing is based on applying hot water vapor at a certain temperature, and determining its constant temperature time and maximum temperature according to the characteristics, cost and production cycle of the target concrete. As a kind of cementing material, fly ash is more and more used in concrete. This study summarizes the previous literature on the effect of steam curing system on the performance of fly ash based concrete. The increase of fly ash content has obvious negative effects on the early compressive strength, splitting tensile strength and elastic modulus of concrete, while the early high temperature curing can significantly improve the early mechanical properties of fly ash based concrete. Concrete exposed to steam curing at low temperatures of 45°C to 80°C and for longer periods of time within a 24-hour cycle can achieve better concrete performance. By studying the effect of steam curing on fly ash base concrete, a suitable curing scheme is developed and applied in practical engineering.   1. Si Xiuyong, Hu Weihua, Pan Huimin. (2024).Carbonation resistance and prediction model of concrete with mineral admixtures. Concrete,27 ,17-20. 2. Wang Xu. (2023).Analysis of influencing factors and optimization measures for testing concrete strength by rebound method. Foshan Ceramics, 33 (7),87-89. 3. Zhang Xuhui, Liu Bowen, Yang Ling, et al.(2020).Experimental study on carbonation performance of concrete under different temperatures and strengths. Building Structure, 50(24),110-115. 4. Fan Yaohu, He Zhen, Cai Xinhua, et al.(2021).Study on the effects of fly ash dosage and curing conditions on mechanical properties and carbonation resistance of concrete. Guangdong Building Materials, 37 (7),4-6, 3 |

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| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **No, change title** | **Effects of Steam Curing on Fly Ash-Based Concrete Performance: A Review** |
| **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.** | **No, improve abstract** | **Abstract：**Steam curing is a method used to increase the strength of concrete at an early stage. Steam curing is based on applying hot water vapor at a certain temperature, and determining its constant temperature time and maximum temperature according to the characteristics, cost and production cycle of the target concrete. As a kind of cementing material, fly ash is more and more used in concrete. This study summarizes the previous literature on the effect of steam curing system on the performance of fly ash based concrete. The increase of fly ash content has obvious negative effects on the early compressive strength, splitting tensile strength and elastic modulus of concrete, while the early high temperature curing can significantly improve the early mechanical properties of fly ash based concrete. Concrete exposed to steam curing at low temperatures of 45°C to 80°C and for longer periods of time within a 24-hour cycle can achieve better concrete performance. By studying the effect of steam curing on fly ash base concrete, a suitable curing scheme is developed and applied in practical engineering. |
| **Is the manuscript scientifically, correct? Please write here.** | yes |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention**  **them in the review form.** | No, mist be increased | It has been increased to 21 |
| **Is the language/English quality of the article suitable for scholarly communications?** | ok |  |
| **Optional/General** comments |  |  |

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| **PART 2:** | | |
|  | **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)* |
| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in details)* |  |