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COVER LETTER

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[*October 6th, 2023*]

Dear Editor,
I wish to submit an original research article entitled "[Engineering Properties of Seawater Mixed Mortar with Batching Plant Residual Waste as Aggregate Replacement]" for consideration by SINERGI.

We confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere. We promise not to withdraw this article after it has been processed by the Editorial Team. If there is a withdrawal, we are willing to pay a penalty of USD 150 (IDR 2000K) to the SINERGI Editorial Team.

In this paper, I/we report on / show that:

Field	:	Civil Engineering
Topic	:	Concrete and Material Engineering
Brief Background	:	Manufacturers use batching facilities to produce vast quantities of concrete in order to meet market demand. The company uses low-strength mortar to moisten all equipment used to convey concrete products during the production process. After that, the mortar is no longer necessary and is discarded. The remaining mortar deposits were permitted to cure and accumulate at a daily production rate of 12.5 m^3. Large quantities and continuous production in the absence of regular consumption pose a problem for which a solution must be found. Given the phenomenon of global warming and the concurrent increase in urban population worldwide, the availability of freshwater is progressively diminishing, thereby becoming it a precious resource. The utilization of freshwater in the manufacturing process of concrete constitutes a substantial proportion (9%) of the overall freshwater extraction dedicated to industrial activities. Seawater, as an alternative water

		supply for concrete manufacturing, requires minimum preparation, mostly including the removal of sediment through filtration. Alternative approaches, such as using wastewater derived from industrial effluent or employing desalination techniques for treating hard waters, need a substantial energy input, so contributing to the overall emissions associated with concrete manufacturing. In recent decades, researchers have dedicated significant efforts towards comprehending the characteristics and properties of concretes composed of seawater-mixed and sea sand.
Research Problem	:	So far, no scholarly investigations have been undertaken to explore the utilization of batching plan refuse and seawater as mixing water in the mortar for patch repair material, specifically with regards to the mechanical characteristics of the materials that facilitate their application as construction materials. Numerous prior investigations have substantiated the viability of utilizing waste materials for the production of dependable building elements, hence offering notable benefits in terms of environmental concerns. This study is the first investigation to provide empirical evidence on the material qualities of dried mortar waste when employed as a substitute material for concrete in a batching facility.
Overview of Method	:	This study demonstrated the utilization of residual waste as aggregate replacement of seawater mixed mortar. The X-ray fluorescence (XRF) and X-ray diffraction (XRD) were conducted to identify constituent material and crystalline phases of raw waste materials. Portland composite cement (PCC) was chosen to be used due to its resistance to aggressive environment. Seawater is used to be mixing water in order to solve the water crisis and due to its good performance in corrosion resistance. The fresh (slump and flow table) and mechanical properties (shrinkage, compressive strength, split tensile strength, compressive strength and shrinkage) of mortar were tested.

Significant finding	:	Based on the results, it could be concluded that the new mortar can be used as the specie material, repair material, and another non-structural use.

We have no conflicts of interest to disclose.

Thank you for your consideration of this manuscript.

Sincerely,
[*Pinta Astuti*]

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AUTHORSHIP STATEMENT

I wish to submit an original research article entitled "[Engineering Properties of Seawater Mixed Mortar with Batching Plant Residual Waste as Aggregate Replacement]" for consideration by SINERGI.

All persons who meet authorship criteria are listed as authors, and all authors certify that they have participated sufficiently in work to take public responsibility for the content, including participation in the concept, design, analysis, writing, or revision of the manuscript.

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POTENTIAL REVIEWERS

Please submit 3 (three) potential reviewers (*that have not listed in SINERGI*) to speed up the review process that competent for the topic and has a good reputation in that area.

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