

SUMMARY

Rizal Maisya Armanda, majoring in architectur engineering, Faculty of Engineering University of Brawijaya July 2013, a floating structure on Seaweed Research Center on the coast of Ponjuk, the island of Talango, Madura. Supervising lecturer : Agung Murti Nugroho and Edi Hari Purwono.

Talango Sumenep the island is an area of potential resources of brown seaweed (*Sargassum SP*), and other algae. Market demand will increase for this material sargassum research. However, the sargassum sp obtained is still from nature and yet cultivation, especially greatest risk is damage to coral reef ecosystems, biodiversity sustainable efforts required for maintaining the sustainablility potential of brown seaweed that is by effort of research and cultivation of activities in order not to damage the coral reef ecosystem. To conduct research activities and the cultivation of seaweed and kelp are benefiting from research result, the needed a place to conduct research activities of seaweed. Development of the region in the coast of ponjuk can be done in the water without causing changes to the ecosystem. Ways of development of the region in the coast without disrupting coastal ecosystems and can nimalism damage to the environment, among others is a floating pontoon structures using Eco Material Float.

This design was done at the stages of analysis before designing include the study of literature, comparisons of study, observation, and field experiments with scale model, then the data can be processed produce a synthesis and summaries of who later became a general concept that was developed during the design used.

On the product design research activities and hosts the cultivation of seaweed without disturbing the coastal ecosystems and environmental damage. Floating pontoon type structure is very flexible compared to others types of offshore structures. Pontoon also known in the literature as Mat because small prolific long draft. Pontoon float based eco is the structure of a suitable buoyancy as it does not damage ecosystems, coral reefs and seaweed on the beach Ponjuk, village Padike, Talango, Madura.

Key words : Floating Pontoon Structures, Eco Float, Research Centres, Seaweed and coral reefs.