Design Consideration of Cage Structures

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Abstract

The limitation of freshwater in the last half century, on the one hand, and the global demand for aquatic and healthy food on the other hand, has led to the use of marine environments for aquaculture production. Hence, fish growing in cages has grown steadily and is now the fastest way to meet the global needs, especially in developing countries. In this regard, identifying and selecting the appropriate cage and optimizing it according to the conditions of the breeding region is one of the fundamental steps in efficient implementation of the plan and achieving

maximum productivity. In this paper, considerations for designing cage structures are investigated. The results of this study indicate that by identifying parameters such as effective wave height, wind speed, wave motion and wave pattern, the amount of force applied to the structure caused by the factors can be determined. Therefore, by identifying undesirable consequences and choosing the type and method of deploying a cage structure in accordance with the conditions of the region, destructive effects can be reduced and a significant improvement in the performance of cage structures.
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