Department : **Civil**

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Group No: **9**

Guided By

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Project Title

COMPARATIVE STUDY OF BAMBOO REINFORCED CONCRETE BEAM AND STEEL REINFORCED CONCRETE BEAM

Abstract:

This project is developed with an objective of making the construction economical as compared to steel reinforced concrete structure. Steel is specifically used as a reinforcement in concrete to resist tensile load, because concrete is weak in tension while steel is strong. Due to some negative aspects of steel such as high production cost, non-renewable source and non eco-friendly behavior; we need to replace it with such appropriate construction material. In present study, bamboo is considered as a good construction material. On other hand, bamboo is easily available, eco-friendly and renewable source of construction material.

In this project, concrete for mix M20 has been used as a nominal mix. Beams of size 150*150*700 mm were selected as a standard size. Bamboo reinforced concrete and steel reinforced concrete beams were casted for 7 days, 28 days, 3 months & 6 months testing, each of three beam were casted to maintain accuracy. These all the beams were tested at appropriate defined time to check flexure strength of beam and compare it of both types of beam. Finally, from these experimental studies, it was concluded that bamboo is most economical construction material and it can be used in case of light load structures, Low-cost structures and Temporary structures as a non-structural element.

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