Asian Journal of Multidimensional Research
ISSN: 2278-4853 Vol. 12, Issue 3, March 2023 SJIF 2022 = 8.179
A peer reviewed journal

STRUCTURAL PERFORMANCE OF STADIUM WITH THIN SHELL ROOF STRUCTURE

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DOI: 10.5958/2278-4853.2023.00044.7

ABSTRACT

Structural Engineers and Architects Focused on Shell Structures because of Aesthetic Concerns and their ability to cover large spans also in Extreme condition such as Earthquakes and Hurricanes. In this thesis, Analysis of dome form, Para sine form and Mongue's Surface of Thin Shell Roof Structure in stadium are analysed. Deflection, Moment, Stress variation are analysed based on with Bracing and uniform thickness of shell, Without Bracing and uniform thickness of shell, with bracing and varying thickness of shell and without bracing and varying thickness of shell. For the comparison propose and to observe effect of edge and mesh fineness, dome is modeled as an axi-symmetric model and two axi-symmetric load i.e. self-weight and Seismic Loads are applied to the dome roof in SAP 2000. With Bracing and uniform thickness of slab, Without Bracing and uniform thickness of shell, with bracing and varying thickness of shell and without bracing and varying thickness of shell Roof Structure in Stadium is compared.

KEYWORDS: *Dome, Parabolic Sinusoidal Curve, Bracing Etc.*

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