

Comparisons of Tensile Structure with Conventional Steel Structure

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Abstract: *Tensile structures represent a new chapter in the history of building structures. Non-linear material behaviour, large strains and displacements and the use of fabric action to resist loads require a fundamentally different approach to structural analysis and design compared to steel structures. The analysis consists of temporary rectangular shed for steel structure and tensile structure, to carry out the form finding and load analysis of each structure and report key values of stress, deflection and reactions. The results show very high levels of variability in terms of stresses, displacements, reactions and material design strengths, and high light the need for future work to harmonise analysis methods and provide validation and benchmarking for fabric analysis software. The procedure is incorporated into the RFEM Software and the results of some analyses are given.*

Keywords: Tensile fabric Structures, Shape, Form-Finding, Analysis, Dlubal RFEM

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BIOGRAPHY



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