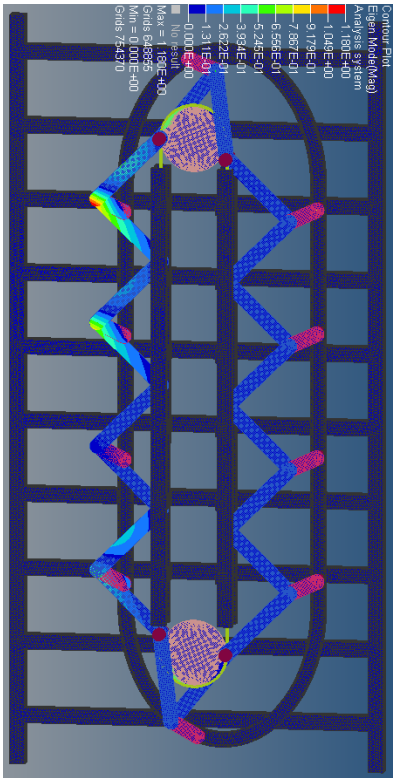

Fourth Mode Shape (Frequency=4.52Hz)

5. Discussions

Maximum equivalent stress in pins in finite element analysis for each case is as follows

CASE No. (Thickness in mm)	Maximum equivalent stress (N/mm^2)
Case1 (10mm)	141.7
Case 2 (8mm)	182.7
Case 3 (5mm)	251.3

Maximum deformation of links in finite element analysis for each case is as follows

CASE No. (Thickness in mm)	Maximum deformation (mm)
Case1 (10mm)	2.72
Case 2 (8mm)	3.01
Case 3 (5mm)	4.44

For optimization on the basis of minimum is a best criterion, for selection of link thickness values of maximum equivalent stress and deformation for Case 3 are safe and acceptable by the client.

6. Conclusions

CAD modeling of link mechanism in vertical carousel machine in CATIA V5 and Finite element analysis as well as modal analysis in MSC NASTRAN can be successfully done. Further simulation and analysis with experimental setup is recommended.

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Author Profile

Mr. Sammed A. Patil is M. E. –Research Fellow in Department of Mechanical Engineering, Dr. J J Magdum College of Engg, Jaysingpur, Maharashtra.

Prof. Vijay J Khot is Associate Professor at Dept of Mechanical Engineering, Dr. J J Magdum College of Engg, Jaysingpur, Maharashtra.