

: Notations :

- u = In plane displacement along x axis.
- v = In plane displacement along y axis
- w = Displacement normal to the middle surface of the structure
- h = Thickness of the plate
- ϵ_x = Strain Component along x axis
- ϵ_y = Strain Component along y axis
- ϵ_{xy} = Shearing Strain Component in cartesian Co-ordinate.
- E = Young's Modulus
- G = Shear Modulus of Elasticity and Pasternak Foundation Parameter
- ν = Poisson's ratio
- U = Potential Energy
- N_x, N_y = Force per Unit length in the x , and y direction
- N_{xy} = Force per Unit length in x - y direction
- M_x = Bending moment per unit length of the section of the structure perpendicular to x axis
- M_y = Bending moment per unit length of the section of the structure perpendicular to y axis.
- M_{xy} = Twisting moment per unit length
- σ_x = Normal component of stress parallel to x - axis
- σ_y = Normal component of stress parallel to y axis
- σ_{xy} = Normal component of stress along x - y direction
- ρ = Density of the material of the structure

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|----------------|---|--|---|-------------------|
| D | = | $\frac{ER^3}{12(1-\nu^2)}$ | = | Flexural rigidity |
| F | = | Stress Function | | |
| K ₁ | = | Curvature along x- axis | | |
| K ₂ | = | Curvature along y- axis | | |
| p | = | Normal load intensity | | |
| K | = | Constant related to elastic (Winkler Foundation) parameter | | |
| T | = | Time period | | |
| e ₁ | = | First Strain invariant of the middle surface of the plate | | |
| e ₂ | = | Second Strain invariant of the middle surface of the plate | | |
| A | = | Amplitude of vibrations | | |