

EXAMPLE:

Equilibrium Equations

Determine whether the following two dimensional stress field is possible within an elastic structural member. Assume that the body forces are negligible

$$\sigma_{ij} = \begin{bmatrix} -\frac{3}{2} \cdot x^2 \cdot y^2 & x \cdot y^3 \\ x \cdot y^3 & -\frac{1}{4} \cdot y^4 \end{bmatrix}$$