تحلیل سازه۲

تمرین سری پنجم: تحلیل تیروبه روش سختی

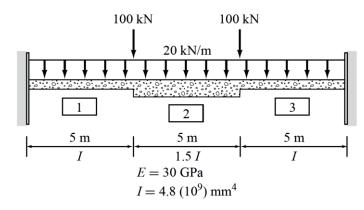


1. If the end displacements of member 2 of the beam shown in the figure are

$$\mathbf{u}_2 = \begin{bmatrix} -0.02532 \text{ m} \\ -0.00434 \text{ rad} \\ -0.02532 \text{ m} \\ 0.00434 \text{ rad} \end{bmatrix}$$

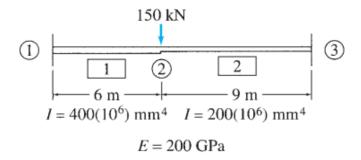
calculate the end forces for the member. Is the member in equilibrium under these forces?

Ref: A. Kassımalı, Matrıx Analysis of Structures, 2nd Ed.



2. Determine the reactions and the members end forces for the beam shown in the figure by using the matrix stiffness method.

Ref: A. Kassımalı, structural Analysıs,4th Ed.



3. For the beam subjected to the linearly varying line load w shown in figure, Determine the rightend rotation and the reactions. Assume EI constant throughout the beam.

Ref: The First Course in the Finite Element, D. L. Logan, 4th Edition.

