

Contents

1. Generate mesh.....	2
2. Label mesh	3
2.1 Label elements.....	3
2.1.1 Label active zones.....	3
2.1.3 Label boundaries.....	3
2.2 Label edges.....	3
2.2.1 Label active edges	3
2.1.3 Label boundaries.....	3
3. Set material properties	4
3.1 Set materials in zones	4
3.2 Set materials on edges.....	4
4. Formulate FEM equation	5
4.1. FEM equation for zones	5
4.1.1 Compute elemental matrix and vector for basic equation.....	5
4.1.2 Assemble global matrix and vector for basic equation.....	5
4.1.3 Compute elemental matrix and vector for 3rd kind B.C.....	5
4.1.4 Assemble global matrix and vector for 3rd kind B.C.....	5
4.2 FEM equation for edges.....	5
4.2.1 Compute elemental matrix and vector for basic equation.....	5
4.2.2 Assemble global matrix and vector for basic equation.....	5
4.2.3 Compute elemental matrix and vector for 3rd kind B.C.....	5
4.2.4 Assemble global matrix and vector for 3rd kind B.C.....	5
4.3 FEM coupled equation	5
4.3.1 A-B.....	5
4.3.2 B-A.....	5
4.4 Implement 1st kind B.C.	5
4.4.1 Implement 1st kind B.C. for zones	5
4.4.2 Implement 1st kind B.C. for edges	5
4.5 Deactivate unused nodes.....	5
4.5.1 Deactivate unused nodes for zones	5
4.5.3 Deactivate unused nodes for edges.....	5