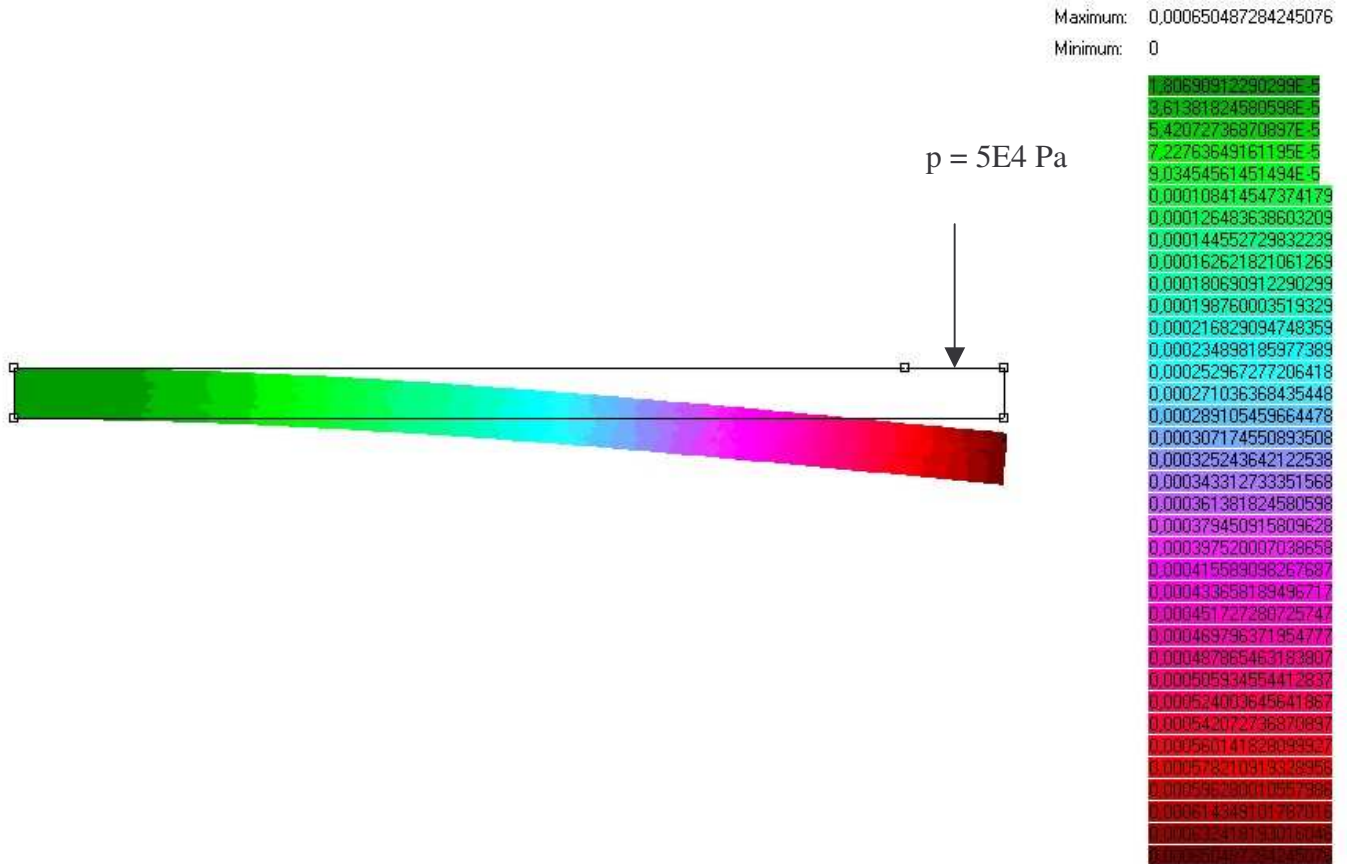


DEFLECTION



1. File name and directory setting

Preprocessor – Geometry file – New
Job name (Name of solved problem)
Physical problem – plane stress xy

2. Geometry and boundary conditions

Preprocessor – Geometry file – Geometry Builder – KeyPoint (Ctrl+K)

Position x: 0 m

Position y: 0 m

Ctrl+K

Position x: 1 m

Position y: 0 m

Ctrl+K

Position x: 1 m

Position y: 0.1 m

Ctrl+K

Position x: 0.9 m

Position y: 0.1 m

Ctrl+K

Position x: 0 m

Position y: 0.1 m

Preprocessor – Geometry file – Geometry Builder – StraightLine (Ctrl+L)

From KP (keypoint): 0
 To KP: 1
 B. C. Type: 0 - free movement
 B. C. 1: 0
 B. C. 2: 0
 B. C. 3: 0
 Ctrl+L
 From KP: 1
 To KP: 2
 B. C. Type: 0 - free movement
 B. C. 1: 0
 B. C. 2: 0
 B. C. 3: 0
 Ctrl+L
 From KP: 2
 To KP: 3
 B. C. Type: 14 - pressure
 B. C. 1: 0
 B. C. 2: $-5E-4 Pa$
 B. C. 3: 0
 Ctrl+L
 From KP: 3
 To KP: 4
 B. C. Type: 0 - free movement
 B. C. 1: 0
 B. C. 2: 0
 B. C. 3: 0
 Ctrl+L
 From KP: 4
 To KP: 0
 B. C. Type: 13 - movement
 B. C. 1: 1 - $u_x = 0 m$
 B. C. 2: 1 - $u_y = 0 m$
 B. C. 3: 0

3. Material Model

Preprocessor – MaterialModeler
 Young Modul = $2E11 Pa$
 Poisson Ratio = 0.3
 Others = 0
 Click to “Add to local” button

4. Attributes

Preprocessor – Attribute
 Click in the closed area
 Select material (material 0)
 Define size of mesh (max area of elementar triangle)
 B. C. 1: 0 K - initial temperature
 B. C. 2: 0 K - end temperature

5. Meshing

Preprocessor – Mesh

6. Solution

Solver

7. Show Results

PostProcessor – Nodal Results – Total Value – SelectALL *.Res101 (DILATATION)
PostProcessor – Element Results – Total Value – SelectALL *.Res102 (DEFORMATION)