1 Versió 1 (la més recent)

Pregunta 1

Correcte

Puntuació 10,00 sobre 10,00

Consider the domain defined by the mesh **meshEscaire2foratsQuad.m** and made of an elastic material with Young Modulus $E = 1.0e+7\frac{N}{mm^2}$, Poisson ratio $\nu = 0.3$ and thickness $th = 0.20mm$. The two boundary internal circles are named as the figure shows C_1 and C_2

(a) (3 points) First suppose that the piece is fixed on these two circles, while an horizontal load $forceLoad = [50000; 0]$ is applied to the right straight border as showed in the figure. Then the maximum of the absolute values of the x-displacements (horizontal) is:

- 1.5608e-01
- Leave it empty (no penalty)
- 1.5756e-01 ✔
- 1.5887e-01
- 1.5746e-01

Puntuació 3,00 sobre 3,00

La resposta correcta és: 1.5756e-01

Hint1: The maximum of the absolute values of the y-displacements (vertical) is 6.6489e-02

(b) (3points) Maintaining fixed the two circles now suppose that only a vertical $forceLoad = [0; -25000]$ is applied at the straight bottom border as showed in the figure. Then, the maximum of the absolute values of the y-displacements (vertical) of all nodes is :

- Leave it empty (no penalty)
- 7.9579e-02
- 7.8801e-02 ✔
- 7.8016e-02
- 7.8830e-02

Puntuació 3,00 sobre 3,00

La resposta correcta és: 7.8801e-02

Hint2: The maximum of the absolute values of the x-displacements is 3.3257e-02

Hint3: Be careful. The force loads are always column vectors

(c) (4 points) Now suppose that only the circle C_2 is fixed, while a vertical $forceLoad = [0; -30000]$ is applied in all the nodes of the lower semicircle of C_1 (including the equatorial points as the figure shows). Then, the maximum of the absolute values of the y-displacements (vertical) of all nodes is :

- 1.4896e+00
- 1.4847e+00 ✔
- 1.4942e+00
- 1.4780e+00
- Leave it empty (no penalty)

Puntuació 4,00 sobre 4,00

La resposta correcta és: 1.4847e+00

Hint3: The maximum of the absolute values of the x-displacements is 7.3988e-01

Torna a començar | Desa | Emplena amb les respostes correctes | Envia i acaba | Tanca la previsualització

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