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Anexo A
Código de elementos sólidos

Abaixo segue o código do processamento realizado no programa de Elementos Finitos ABAQUS para a aorta com sua geometria perfeita e com elementos sólidos e funcional de energia Ogden.

```
*Heading
** Job name: prop_solido Model name: Model-1
*Preprint, echo=YES, model=YES, history=YES, contact=YES
**
** PARTS
**
*Part, name=Part-3
*Node
      1, 0.0140000004,  0.349999994,           0.
      2, 0.0189999994,  0.349999994,           0.
      3, 0.0146000003,           0.,           0.
      4, 0.0118000004,           0.,           0.
      5, 0.0117775491,  0.349999994, 0.00756897125
      6, 0.00581581006,  0.349999994, 0.0127348481
*Element, type=C3D10MH
   1, 1043,   22,   10,  343, 1245, 1244, 1243, 1247, 1246, 1248
   2, 1043,   10,   22,    9, 1243, 1244, 1245, 1250, 1249, 1251
   3, 1043,  343,  789,  384, 1247, 1253, 1252, 1255, 1254, 1256
   4,    9,  789,  830, 1043, 1259, 1258, 1257, 1250, 1252, 1260
*Surface, type=ELEMENT, name=_PickedSurf14, internal
__PickedSurf14_S2, S2
__PickedSurf14_S4, S4
__PickedSurf14_S3, S3
__PickedSurf14_S1, S1
*End Assembly
**
** MATERIALS
**
*Material, name=Material-1
*Hyperelastic, ogden
 84432.8, 2.446,    0.
**
** BOUNDARY CONDITIONS
**
** Name: BC-1 Type: Symmetry/Antisymmetry/Encastre
*Boundary
_PickedSet10, PINNED
** Name: BC-2 Type: Symmetry/Antisymmetry/Encastre
*Boundary
_PickedSet11, YASYMM
** ---------------------------------------------------------------
-
**
** STEP: Step-1
```

```
**
*Step, name=Step-1, nlgeom=YES
pressaoHP
*Static
1., 1., 1e-05, 1.
**
** LOADS
**
** Name: Load-1   Type: Pressure
*Dsload
_PickedSurf12, HP, 3.6e-05, 0.35, 0.
**
** OUTPUT REQUESTS
**
*Restart, write, frequency=0
**
** FIELD OUTPUT: F-Output-1
**
*Output, field, variable=PRESELECT
**
** HISTORY OUTPUT: H-Output-1
**
*Output, history, variable=PRESELECT
*End Step
** ----------------------------------------------------------------
-
**
** STEP: tracao
**
*Step, name=tracao, nlgeom=YES
*Static
1., 1., 1e-05, 1.
**
** BOUNDARY CONDITIONS
**
** Name: BC-3 Type: Displacement/Rotation
*Boundary
_PickedSet13, 2, 2, 0.036
**
** OUTPUT REQUESTS
**
*Restart, write, frequency=0
**
** FIELD OUTPUT: F-Output-1
**
*Output, field, variable=PRESELECT
**
** HISTORY OUTPUT: H-Output-1
**
*Output, history, variable=PRESELECT
*End Step
** ----------------------------------------------------------------
-
**
** STEP: pressao
**
*Step, name=pressao, nlgeom=YES
*Static, riks
1., 1., 1e-05, , ,
**
** LOADS
```

```
**
** Name: Load-2   Type: Pressure
*Dsload
_PickedSurf14, P, 1.
**
** OUTPUT REQUESTS
**
*Restart, write, frequency=0
**
** FIELD OUTPUT: F-Output-1
**
*Output, field, variable=PRESELECT
**
** HISTORY OUTPUT: H-Output-1
**
*Output, history, variable=PRESELECT
*End Step
```