
straingloballaminate

Computes the global strains at the top, middle, and bottom of each laminate

Inputs

eps0 - Midplane strains
kappa - Longitudinal elastic modulus
tplies - Thickness of each ply
nplies - Thickness of each ply

Outputs

[strainglobalplies] - Global strains
 epsx - Global longitudinal strain
 epsy - Global transverse strain
 epsxy - Global in-plane strain

Calling the Function

```
[strainglobalplies]=straingloballaminate(eps0,kappa,nplies,tplies)
```

Testing File

Click [here](#) to see a testing file for using the function `straingloballaminate`

Example

Inputs:

Number of plies: 3

For Ply: 1

Thickness of Ply: 0.005
Midplain Strain: 3.123e-07
Midplane Curvature: 2.971e-05

For Ply: 2

Thickness of Ply: 0.005
Midplain Strain: 3.492e-06
Midplane Curvature: -0.0003285

For Ply: 3

Thickness of Ply: 0.005
Midplain Strain: -7.598e-07
Midplane Curvature: 0.0004101

Outputs:

For Ply: 1

Global Strains

Top		
Epsx		8.9475E-08
Epsx		5.95575E-06
Gammaxy		-3.83555E-06
Middle		
Epsx		1.6375E-07
Epsx		5.1345E-06
Gammaxy		-2.8103E-06
Bottom		
Epsx		2.38025E-07
Epsx		4.31325E-06
Gammaxy		-1.78505E-06

For Ply: 2

Global Strains

Top		
Epsx		2.38025E-07
Epsx		4.31325E-06
Gammaxy		-1.78505E-06
Middle		
Epsx		3.123E-07
Epsx		3.492E-06
Gammaxy		-7.598E-07
Bottom		
Epsx		3.86575E-07
Epsx		2.67075E-06
Gammaxy		2.6545E-07

For Ply: 3

Global Strains

Top		
Epsx		3.86575E-07
Epsx		2.67075E-06
Gamaxy		2.6545E-07
Middle		
Epsx		4.6085E-07
Epsx		1.8495E-06
Gamaxy		1.2907E-06
Bottom		
Epsx		5.35125E-07
Epsx		1.02825E-06
Gamaxy		2.31595E-06

Description

Outputs the global strains at the top, middle, and bottom of each laminate