
strain_ltog

Computes global strains for a unidirectional lamina

Inputs

angle - Angle of ply in degrees
strain_loc - [eps1;eps2;eps12]
 eps1 - Local longitudinal strain
 eps2 - Local transverse strain
 eps12 - Local in-plane strain

Outputs

strain_glo - [epsx;epsy;epsxy]
 epsx - Global longitudinal strain
 epsy - Global transverse strain
 epsxy - Global in-plane strain

Calling the Function

```
[strain_glo]=strain_ltog(strain_loc,angle)
```

Testing File

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

Example

Inputs:

```
Longitudinal Local Strain: 5.206e-05  
Transverse Local Strain: 0.0007841  
In-Plane Local Strain: 0.001374  
Angle of Lamina: 60
```

Outputs:

Global Strains for Lamina

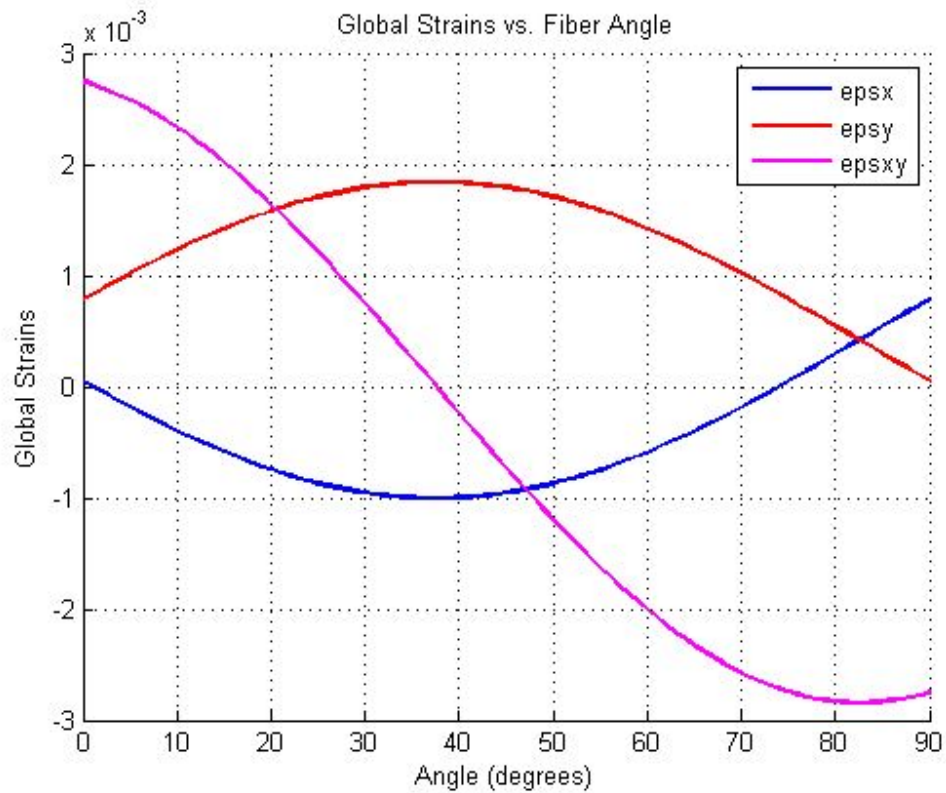
epsx		-0.000588829
epsy		0.00142499
epsxy		-0.00200797

Table:

Global Strains for Lamina

angle	epsx	epsy	epsxy
0	0.0001	0.0008	0.0027
5	-0.0002	0.0010	0.0026
10	-0.0004	0.0012	0.0023
15	-0.0006	0.0014	0.0020
20	-0.0007	0.0016	0.0016
25	-0.0009	0.0017	0.0012
30	-0.0010	0.0018	0.0007
35	-0.0010	0.0018	0.0003
40	-0.0010	0.0018	-0.0002
45	-0.0010	0.0018	-0.0007
50	-0.0009	0.0017	-0.0012
55	-0.0007	0.0016	-0.0016
60	-0.0006	0.0014	-0.0020
65	-0.0004	0.0012	-0.0023
70	-0.0002	0.0010	-0.0026
75	0.0000	0.0008	-0.0027
80	0.0003	0.0005	-0.0028
85	0.0005	0.0003	-0.0028
90	0.0008	0.0001	-0.0027

Graph:



Description

Outputs global strain of a unidirectional lamina in matrix form:
[epsx;epsy;epsxy]