
stress_ltog

Computes global stress for a unidirectional lamina

Inputs

angle - Angle of ply in degrees
stress_loc - [s1;s2;s12]
 s1 - Local longitudinal stress
 s2 - Local transverse stress
 s12 - Local in-plane stress

Outputs

stress_glo - [sx;sy;sxy]
 sx - Global longitudinal stress
 sy - Global transverse stress
 sxy - Global in-plane stress

Calling the Function

```
[stress_glo]=stress_gtol(stress_loc,angle)
```

Testing File

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

Example

Inputs:

Longitudinal Local Stress: 1.714
Transverse Local Stress: -2.714
In-Plane Local Stress: -4.165
Angle of Lamina: 60

Outputs:

Global Stress for Lamina

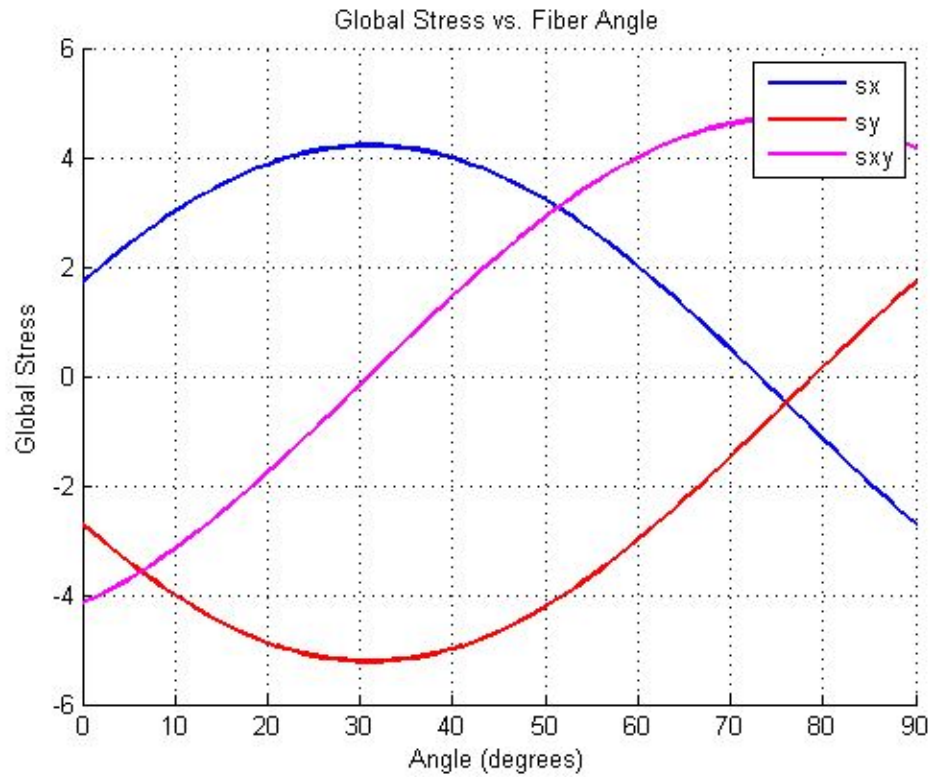
sx		2
sy		-3
sxy		3.99988

Table:

Global Stress for Lamina

angle	sx	sy	sxy
0	1.7140	-2.7140	-4.1650
5	2.4036	-3.4036	-3.7173
10	3.0050	-4.0050	-3.1566
15	3.4999	-4.4999	-2.5000
20	3.8732	-4.8732	-1.7674
25	4.1137	-5.1137	-0.9812
30	4.2140	-5.2140	-0.1651
35	4.1711	-5.1711	0.6560
40	3.9862	-4.9862	1.4571
45	3.6650	-4.6650	2.2140
50	3.2173	-4.2173	2.9036
55	2.6566	-3.6566	3.5050
60	2.0000	-3.0000	3.9999
65	1.2674	-2.2674	4.3732
70	0.4812	-1.4812	4.6137
75	-0.3349	-0.6651	4.7140
80	-1.1560	0.1560	4.6711
85	-1.9571	0.9571	4.4862
90	-2.7140	1.7140	4.1650

Graph:



Description

Outputs global stress of a unidirectional lamina in matrix form:
[sx;sy;sxy]