
QandS

Computes the reduced stiffness matrix and the compliance matrix for a unidirectional lamina

Inputs

moduli - [E1 E2 nu12 G12]
 E1 - Local longitudinal elastic modulus
 E2 - Local transverse elastic modulus
 nu12 - Local major Poisson's ratio
 G12 - Local in-plane shear modulus

Outputs

[Q] - Reduced stiffness matrix
[S] - Compliance matrix

Calling the Function

[Q,S]=QandS(moduli)

Testing File

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

Example

Inputs:

Longitudinal Elastic Modulus: 181
Transverse Elastic Modulus: 10.3
Poisson's Ratio: 0.28
Shear Modulus: 7.17

Outputs:

Reduced Stiffness Matrix

181.8111	2.8969	0
2.8969	10.3462	0
0	0	7.1700

Compliance Matrix

0.0055	-0.0015	0
-0.0015	0.0971	0
0	0	0.1395

Description

Outputs the reduced stiffness matrix and the compliance matrix for a unidirectional lamina