



Verification Example 1

Random Applied Stress

Problem Definition

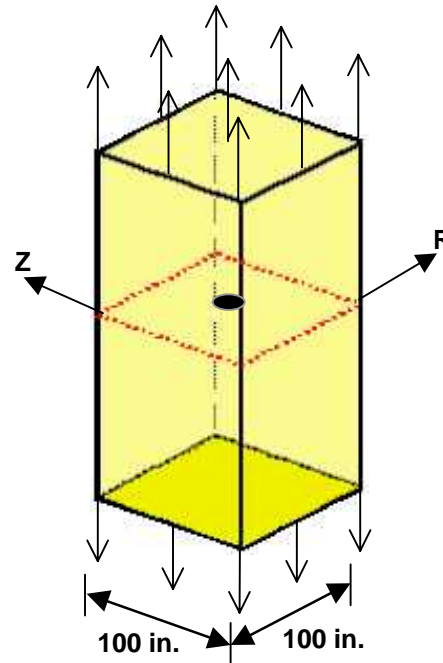
- Verify Darwin™ results for the stress scatter random variable
- Semi-infinite block with initial defect area = 314.59 mils² (0.2029 mm²)
- Lognormal applied stress
 - median = 100 ksi (689.48 MPa)
 - COV = 10%

Comparison Standard

- Analytical Solution

Result

- The analytical solution falls within the 95% confidence bounds predicted by Darwin™.



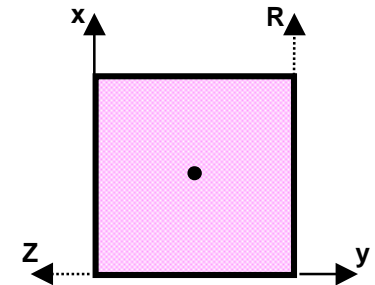
Applied Stress



Lognormal
Median = 100 ksi
COV = 10%

Initial Defect

Circular Radius = 10 mil
Area = 314.59 mil²



Solution Verification

