
Point Q

Stresses:

Ma = 125.371
Mm = 0.000
Ta = 0.000
Tm = 0.000

Endurance Limit

S'e = 26.500
a = 2.000
b = -0.217
ka = 0.845
kb = 0.938
kc = 1.000
Se = 20.997

Stress Concentrations

Kt = 2.700
Kts = 2.200
r = 0.011
sqrt(a) [bending] = 0.121
sqrt(a) [torsion] = 0.091
Kf = 1.787
Kfs = 1.642

#--- Solving for n using Goodman criterion ---#

Se = 20.997
Kf = 1.787
Goodman: n = 1.503

Endurance Limit

S'e = 26.500
a = 2.000
b = -0.217
ka = 0.845
kb = 0.938
kc = 1.000
Se = 20.997

Stress Concentrations

Kt = 2.700
Kts = 2.200
r = 0.011
sqrt(a) [bending] = 0.121
sqrt(a) [torsion] = 0.091
Kf = 1.787
Kfs = 1.642

#--- Solving for n using yielding criterion ---#

Se = 20.997
Kf = 1.787
yielding: n = 3.150

Point R

Stresses:

Ma = 292.532
Mm = 0.000

Ta = 0.000
Tm = 0.000

Endurance Limit

S'e = 26.500
a = 2.000
b = -0.217
ka = 0.845
kb = 0.915
kc = 1.000
Se = 20.494

Stress Concentrations

Kt = 1.700
Kts = 1.500
r = 0.069
sqrt(a) [bending] = 0.121
sqrt(a) [torsion] = 0.091
Kf = 1.479
Kfs = 1.371

#--- Solving for n using Goodman criterion ---#

Se = 20.494
Kf = 1.479
Goodman: n = 1.501

Endurance Limit

S'e = 26.500
a = 2.000
b = -0.217
ka = 0.845
kb = 0.915
kc = 1.000
Se = 20.494

Stress Concentrations

Kt = 1.700
Kts = 1.500
r = 0.069
sqrt(a) [bending] = 0.121
sqrt(a) [torsion] = 0.091
Kf = 1.479
Kfs = 1.371

#--- Solving for n using yielding criterion ---#

Se = 20.494
Kf = 1.479
yielding: n = 3.223

Point S

Stresses:

Ma = 376.112
Mm = 0.000
Ta = 0.000
Tm = 0.000

Endurance Limit

S'e = 26.500
a = 2.000
b = -0.217
ka = 0.845

kb = 0.870
kc = 1.000
Se = 19.487

Stress Concentrations

Kt = 1.700
Kts = 1.500
r = 0.110
sqrt(a) [bending] = 0.121
sqrt(a) [torsion] = 0.091
Kf = 1.513
Kfs = 1.392

#--- Solving for n using Goodman criterion ---#

Se = 19.487
Kf = 1.513
Goodman: n = 4.456

Endurance Limit

S'e = 26.500
a = 2.000
b = -0.217
ka = 0.845
kb = 0.870
kc = 1.000
Se = 19.487

Stress Concentrations

Kt = 1.700
Kts = 1.500
r = 0.110
sqrt(a) [bending] = 0.121
sqrt(a) [torsion] = 0.091
Kf = 1.513
Kfs = 1.392

#--- Solving for n using yielding criterion ---#

Se = 19.487
Kf = 1.513
yielding: n = 10.061

Point T

Stresses:

Ma = 283.023
Mm = 0.000
Ta = 0.000
Tm = 1487.780

Endurance Limit

S'e = 26.500
a = 2.000
b = -0.217
ka = 0.845
kb = 0.870
kc = 1.000
Se = 19.487

Stress Concentrations

Kt = 2.140
Kts = 3.000
r = 0.022

```
sqrt(a) [bending] = 0.121
sqrt(a) [torsion] = 0.091
Kf = 1.627
Kfs = 2.240
```

```
#--- Solving for n using Goodman criterion ---#
Se = 19.487
Kf = 1.627
Goodman: n = 1.666
```

```
Endurance Limit
S'e = 26.500
a = 2.000
b = -0.217
ka = 0.845
kb = 0.870
kc = 1.000
Se = 19.487
```

```
Stress Concentrations
Kt = 2.140
Kts = 3.000
r = 0.022
sqrt(a) [bending] = 0.121
sqrt(a) [torsion] = 0.091
Kf = 1.627
Kfs = 2.240
```

```
#--- Solving for n using yielding criterion ---#
Se = 19.487
Kf = 1.627
yielding: n = 1.710
```

```
-----
Point U
-----
```

```
Stresses:
Ma = 254.721
Mm = 0.000
Ta = 0.000
Tm = 1487.780
```

```
Endurance Limit
S'e = 26.500
a = 2.000
b = -0.217
ka = 0.845
kb = 0.870
kc = 1.000
Se = 19.487
```

```
Stress Concentrations
Kt = 5.000
Kts = 3.000
r = 0.010
sqrt(a) [bending] = 0.121
sqrt(a) [torsion] = 0.091
Kf = 2.808
Kfs = 2.048
```

```
#--- Solving for n using Goodman criterion ---#
Se = 19.487
Kf = 2.808
```

Goodman: $n = 1.504$

Endurance Limit

$S'_e = 26.500$

$a = 2.000$

$b = -0.217$

$k_a = 0.845$

$k_b = 0.870$

$k_c = 1.000$

$S_e = 19.487$

Stress Concentrations

$K_t = 5.000$

$K_{ts} = 3.000$

$r = 0.010$

\sqrt{a} [bending] = 0.121

\sqrt{a} [torsion] = 0.091

$K_f = 2.808$

$K_{fs} = 2.048$

#--- Solving for n using yielding criterion ---#

$S_e = 19.487$

$K_f = 2.808$

yielding: $n = 1.707$

Point V

Stresses:

$M_a = 198.116$

$M_m = 0.000$

$T_a = 0.000$

$T_m = 1487.780$

Endurance Limit

$S'_e = 26.500$

$a = 2.000$

$b = -0.217$

$k_a = 0.845$

$k_b = 0.879$

$k_c = 1.000$

$S_e = 19.686$

Stress Concentrations

No stress concentration, $K_f = K_{fs} = 1.000$

#--- Solving for n using Goodman criterion ---#

$S_e = 19.686$

$K_f = 1.000$

Goodman: $n = 2.843$

Endurance Limit

$S'_e = 26.500$

$a = 2.000$

$b = -0.217$

$k_a = 0.845$

$k_b = 0.879$

$k_c = 1.000$

$S_e = 19.686$

Stress Concentrations

No stress concentration, $K_f = K_{fs} = 1.000$

```
#--- Solving for n using yielding criterion ---#  
Se = 19.686  
Kf = 1.000  
yielding: n = 2.893
```

```
-----  
Point W  
-----
```

```
Stresses:  
Ma = 84.907  
Mm = 0.000  
Ta = 0.000  
Tm = 1487.780
```

```
Endurance Limit  
S'e = 26.500  
a = 2.000  
b = -0.217  
ka = 0.845  
kb = 0.879  
kc = 1.000  
Se = 19.686
```

```
Stress Concentrations  
Kt = 2.700  
Kts = 2.200  
r = 0.020  
sqrt(a) [bending] = 0.121  
sqrt(a) [torsion] = 0.091  
Kf = 1.915  
Kfs = 1.730
```

```
#--- Solving for n using Goodman criterion ---#  
Se = 19.686  
Kf = 1.915  
Goodman: n = 1.942
```

```
Endurance Limit  
S'e = 26.500  
a = 2.000  
b = -0.217  
ka = 0.845  
kb = 0.879  
kc = 1.000  
Se = 19.686
```

```
Stress Concentrations  
Kt = 2.700  
Kts = 2.200  
r = 0.020  
sqrt(a) [bending] = 0.121  
sqrt(a) [torsion] = 0.091  
Kf = 1.915  
Kfs = 1.730
```

```
#--- Solving for n using yielding criterion ---#  
Se = 19.686  
Kf = 1.915  
yielding: n = 1.798
```

```
-----  
Point X  
-----
```

Stresses:

Ma = 0.000
Mm = 0.000
Ta = 0.000
Tm = 1487.780

Endurance Limit

S'e = 26.500
a = 2.000
b = -0.217
ka = 0.845
kb = 0.879
kc = 0.590
Se = 11.615

Stress Concentrations

Kt = 5.000
Kts = 3.000
r = 0.010
sqrt(a) [bending] = 0.121
sqrt(a) [torsion] = 0.091
Kf = 2.808
Kfs = 2.048

#--- Solving for n using Goodman criterion ---#

Se = 11.615
Kf = 2.808
Goodman: n = 1.963

Endurance Limit

S'e = 26.500
a = 2.000
b = -0.217
ka = 0.845
kb = 0.879
kc = 0.590
Se = 11.615

Stress Concentrations

Kt = 5.000
Kts = 3.000
r = 0.010
sqrt(a) [bending] = 0.121
sqrt(a) [torsion] = 0.091
Kf = 2.808
Kfs = 2.048

#--- Solving for n using yielding criterion ---#

Se = 11.615
Kf = 2.808
yielding: n = 1.630

Point Y

Stresses:

Ma = 0.000
Mm = 0.000
Ta = 0.000
Tm = 1487.780

Endurance Limit

S'e = 26.500
a = 2.000
b = -0.217
ka = 0.845
kb = 0.879
kc = 0.590
Se = 11.615

Stress Concentrations

No stress concentration, Kf = Kfs = 1.000

#--- Solving for n using Goodman criterion ---#

Se = 11.615
Kf = 1.000
Goodman: n = 4.020

Endurance Limit

S'e = 26.500
a = 2.000
b = -0.217
ka = 0.845
kb = 0.879
kc = 0.590
Se = 11.615

Stress Concentrations

No stress concentration, Kf = Kfs = 1.000

#--- Solving for n using yielding criterion ---#

Se = 11.615
Kf = 1.000
yielding: n = 3.337

Point Z

Stresses:

Ma = 0.000
Mm = 0.000
Ta = 0.000
Tm = 1487.780

Endurance Limit

S'e = 26.500
a = 2.000
b = -0.217
ka = 0.845
kb = 0.879
kc = 0.590
Se = 11.615

Stress Concentrations

Kt = 2.140
Kts = 3.000
r = 0.020
sqrt(a) [bending] = 0.121
sqrt(a) [torsion] = 0.091
Kf = 1.614
Kfs = 2.217

#--- Solving for n using Goodman criterion ---#

Se = 11.615
Kf = 1.614

Goodman: $n = 1.813$

Endurance Limit

$S'_e = 26.500$

$a = 2.000$

$b = -0.217$

$k_a = 0.845$

$k_b = 0.879$

$k_c = 0.590$

$S_e = 11.615$

Stress Concentrations

$K_t = 2.140$

$K_{ts} = 3.000$

$r = 0.020$

\sqrt{a} [bending] = 0.121

\sqrt{a} [torsion] = 0.091

$K_f = 1.614$

$K_{fs} = 2.217$

#--- Solving for n using yielding criterion ---#

$S_e = 11.615$

$K_f = 1.614$

yielding: $n = 1.505$