

```
'露出型鉄骨柱脚の許容曲げモーメント
```

```
Public Function StBase2(fc, ft, B, D, dt, at, NO, TP)
```

```
'変数名
```

```
'断面定数の計算
```

```
Dim n 'ヤング係数比(=15)
Dim BD 'B×D
Dim BDD 'B×D×D
Dim dt1 'dt/D
Dim pt 'at/BD
Dim O 'N/BD (kg/cm2)
n = 15
BD = B * D
BDD = BD * D
dt1 = dt / D
pt = at / BD
O = NO * 1000 / BD
```

```
'釣合中立軸比,釣合軸力を求める.
```

```
Dim xn1b '釣合中立軸比
Dim b '釣合軸力
Dim b '応力度
```

```
xn1b = n * fc / (n * fc + ft) * (1 - dt1)
```

```
Call NMカーブ(xn1b, ft, fc, b, b, b, xn1b, n, pt, dt1)
```

```
'中立軸を求める
```

```
Dim Xnold '旧中立軸
Dim old '旧軸力比
Dim Xnnew '新中立軸
Dim new '新軸力比
Dim new '新モーメント比
Dim '変動中立軸比
Dim Gosa '誤差
Dim Typ As String '降伏モード
Dim new '新単位応力度
```

```
Gosa = 0.004
```

```
Xnold = xn1b
old = b
```

```
If O > b Then
    = 0.3: Typ = "C"
Else
    = -0.2: Typ = "B"
End If
```

```
Do
```

```
Xnnew = Xnold +
If Typ = "C" And Xnnew < xn1b Then
    Xnnew = xn1b
Elseif Typ = "B" And Xnnew > xn1b Then
    Xnnew = xn1b
End If
```

```
Call NMカーブ(Xnnew, ft, fc, new, new, new, xn1b, n, pt, dt1)
```

```
If Abs(O - new) < Gosa Then
Exit Do
End If
```

```
= - * (O - new) / (old - new)
Xnold = Xnnew
old = new
```

```
Loop
```

```
Select Case TP
```

```
Case ""
```

```
StBase2 = new * BDD / 100000
```

```

Case "1"
  StBase2 = Xnnew
Case "2"
  StBase2 = Typ
Case "3"
  StBase2 = new * Xnnew
Case Else
  StBase2 = new * BDD / 100000
End Select

```

End Function

Public Sub NMカーブ(xn1, ft1, fc1, , , , xn0, nnn, ptt, dt0)

```

Dim Scc 'コンクリートの一次モーメント
Dim lcc 'コンクリートの二次モーメント
Dim Sss '鉄筋の一次モーメント
Dim lss '鉄筋の二次モーメント
Dim Snn 'RCの一次モーメント
Dim Inn 'RCの二次モーメント
Dim '軸力比
Dim '単位応力度

```

Select Case xn1

```

Case ls >= 1
  Scc = xn1 - 0.5
  lcc = xn1 ^ 2 - xn1 + 1 / 3
Case ls <= 0
  Scc = 0
  lcc = 0
Case Else
  Scc = xn1 ^ 2 / 2
  lcc = xn1 ^ 3 / 3

```

End Select

Select Case dt0

Case ls = 0.5

Select Case xn1

```

Case ls >= 1 - dt0
  Sss = 0
  lss = 0
Case ls <= 0
  Sss = xn1 - dt0
  lss = (xn1 - dt0) ^ 2
Case Else
  Sss = xn1 - 1 + dt0
  lss = (xn1 - 1 + dt0) ^ 2

```

End Select

Case Else

Select Case xn1

```

Case ls >= 1 - dt0
  Sss = 0
  lss = 0
Case ls <= dt0
  Sss = 2 * xn1 - 1
  lss = (xn1 - dt0) ^ 2 + (xn1 - 1 + dt0) ^ 2
Case Else
  Sss = xn1 - 1 + dt0
  lss = (xn1 - 1 + dt0) ^ 2

```

End Select

End Select

```

Snn = Scc + nnn * ptt * Sss
Inn = lcc + nnn * ptt * lss

```

```

If xn1 < xn0 Then
  = ft1 / nnn / (1 - dt0 - xn1)
Else
  = fc1 / xn1
End If

```

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```
= * Snn  
= (Inn - Snn * (xn1 - 0.5)) *
```

End Sub

'露出型鉄骨柱脚の許容曲げモーメント

Public Function Stbase3A(fc, ft, B, D, dt, at, NO, MO, TP)

'変数名

'断面定数の計算

```
Dim n      'ヤング係数比(=15)  
Dim BD     'B×D  
Dim BDD    'B×D×D  
Dim dt1    'dt/D  
Dim pt     'at/BD  
Dim 0      'N/BD (kg/cm2)  
Dim 0      'M/BDD (kg/cm2)  
n = 15  
BD = B * D  
BDD = BD * D  
dt1 = dt / D  
pt = at / BD  
0 = NO * 1000 / BD  
0 = MO * 100000 / BDD
```

'釣合中立軸比,釣合軸力を求める.

```
Dim xn1b   '釣合中立軸比  
Dim b      '釣合軸力  
Dim b      '応力度
```

```
xn1b = n * fc / (n * fc + ft) * (1 - dt1)
```

```
Call NMカーブ2(xn1b, ft, fc, b, 0, b, xn1b, n, pt, dt1)
```

'中立軸を求める

```
Dim Xnold  '旧中立軸  
Dim old    '旧軸力比  
Dim Xnnew  '新中立軸  
Dim new    '新軸力比  
Dim new    '新モーメント比  
Dim        '変動中立軸比  
Dim Gosa   '誤差  
Dim Typ As String '降伏モード  
Dim new    '新単位応力度
```

```
Gosa = 0.004  
Xnold = xn1b  
old = b
```

```
= -0.2: Typ = "B"
```

Do

```
Xnnew = Xnold +
```

```
Call NMカーブ2(Xnnew, ft, fc, new, 0, new, xn1b, n, pt, dt1)
```

```
If Abs(0 - new) < Gosa Then
```

```
Exit Do
```

```
End If
```

```
= - * (0 - new) / (old - new)
```

```
Xnold = Xnnew  
old = new
```

Loop

Select Case TP

Case "1"

```
Stbase3A = Xnnew
```

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```
Case "2"  
  Stbase3A = new * Xnnew  
Case Else  
  Stbase3A = new * (1 - dt1 - Xnnew) * n * pt * BD / 1000  
  If Stbase3A < 0 Then Stbase3A = 0  
End Select
```

End Function

```
Public Sub NMカーブ2(xn1, ft1, fc1, , , , xn0, nnn, ptt, dt0)
```

```
Dim Scc 'コンクリートの一次モーメント  
Dim lcc 'コンクリートの二次モーメント  
Dim Sss '鉄筋の一次モーメント  
Dim lss '鉄筋の二次モーメント  
Dim Snn 'RCの一次モーメント  
Dim Inn 'RCの二次モーメント  
Dim '軸力比  
Dim '単位応力度
```

```
  Select Case xn1
```

```
    Case ls >= 1  
      Scc = xn1 - 0.5  
      lcc = xn1 ^ 2 - xn1 + 1 / 3  
    Case ls <= 0  
      Scc = 0  
      lcc = 0  
    Case Else  
      Scc = xn1 ^ 2 / 2  
      lcc = xn1 ^ 3 / 3
```

```
  End Select
```

```
  Select Case dt0
```

```
    Case ls = 0.5
```

```
      Select Case xn1
```

```
        Case ls >= 1 - dt0  
          Sss = 0  
          lss = 0  
        Case ls <= 0  
          Sss = xn1 - dt0  
          lss = (xn1 - dt0) ^ 2  
        Case Else  
          Sss = xn1 - 1 + dt0  
          lss = (xn1 - 1 + dt0) ^ 2
```

```
      End Select
```

```
    Case Else
```

```
      Select Case xn1
```

```
        Case ls >= 1 - dt0  
          Sss = 0  
          lss = 0  
        Case ls <= dt0  
          Sss = 2 * xn1 - 1  
          lss = (xn1 - dt0) ^ 2 + (xn1 - 1 + dt0) ^ 2  
        Case Else  
          Sss = xn1 - 1 + dt0  
          lss = (xn1 - 1 + dt0) ^ 2
```

```
      End Select
```

```
    End Select
```

```
    Snn = Scc + nnn * ptt * Sss  
    Inn = lcc + nnn * ptt * lss
```

```
    = / (Inn - Snn * (xn1 - 0.5))
```

```
    = * Snn
```

End Sub