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ROBOT97 Treillis triangulaire de type 1.
TRE PLA
VER RIEN
VAR
SECTION "Dimensions" "d_tria1"
**Première diagonale
  %UP=[BOOL] ?"0" : *Haut
  %SLL=]0.0,100000.0,ULENGTH] ?"12.0" : *Longueur L
  %SH=]0.0,100000.0,ULENGTH] ?"3.0"   : *Hauteur H
  %NF=[4,50] ?"6" : *Nombre de panneaux
  %MEMB=[BOOL] ?"1" : *Membrures continues
  %REL=[BOOL] ?"1" : *Noeuds relâchés
SECTION "Spécifiques" "d_tria1a"
  %DIS=[0.0,1000.0,ULENGTH] ?"0.0"    :*Distance D
  %DID=[0.0,1000.0,ULENGTH] ?"0.0"    :*Distance D1
SECTION "Profilés" "d_tria1"
  %CHORU= [profil]?"MIPE 300"      : *Membrure supérieure - profilé ...
  %CHORUgamma= ?"0"                : *............ - angle gamma =
  %CHORL= [profil]?"MIPE 240"      : *Membrure inférieure - profilé ...
  %CHORLgamma= ?"180"             : *............ - angle gamma =
  %DIAGS= [profil]?"DCED 50x5"      : *Diagonales - profilé ...
  %DIAGSgamma= ?"0"               : *............ - angle gamma =
  %POSTS= [profil]?"DCED 60x5"      : *Montants - profilé ...
  %POSTSgamma= ?"0"               : *............ - angle gamma =
VAR FIN
NUM DIS
UNItes
L=m f=kN
NOE
1 0 0
#if %DIS = 0.0
1 tra x=(%SLL/%NF) 2 G (%NF)
(%NF+2)r((%NF+4)/2-3) (%SLL/%NF) (2*%SH/%NF)  (%SLL/2) (%SH)
(%NF+2+%NF/2)r((%NF+4)/2-4) (%SLL/2+%SLL/%NF) (%SH-2*%SH/%NF) (%SLL-%SLL/%NF)
(2*%SH/%NF)
#else
1 tra x=(%SLL/%NF) z=(%DIS/%NF) 2 G (%NF)
(%NF+2)r((%NF+4)/2-3) (%SLL/%NF) (2*%SH/%NF+(%DIS/%NF))  (%SLL/2)
(%SH+(%DIS/2))
(%NF+2+%NF/2)r((%NF+4)/2-4) (%SLL/2+%SLL/%NF)
(%SH+(%DIS/2)-2*%SH/%NF+(%DIS/%NF)) (%SLL-%SLL/%NF) (2*%SH/%NF+%DIS-(%DIS/%NF))
#endif
#if %DID > 0.0
1 tra x=(%SLL/%NF) z=(%DIS/%NF+(2*%DID/%NF)) 2 G (%NF/2)
(%NF/2+1) tra x=(%SLL/%NF) z=(%DIS/%NF-(2*%DID/%NF)) (%NF/2+2) G (%NF/2)
#endif
ELE
#if %MEMB = 0
    1r(%NF-1) 1 2
    (%NF+1) 1 (%NF+2)
    (%NF+2)r(%NF-3) (%NF+2) (%NF+3)
    (2*%NF) (2*%NF) (%NF+1)
    #if %UP = 1
     (2*%NF+1)r(%NF/2-2) 2 (%NF+3)
     (2*%NF+%NF/2)r(%NF/2-2) (%NF)p-1 (2*%NF-1)p-1
    #else
     (2*%NF+1)r(%NF/2-2) 3 (%NF+2)
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      (2*%NF+%NF/2)r(%NF/2-2) (%NF-1)p-1 (2*%NF)p-1
      #endif
      (3*%NF+1)r(%NF-2) 2 (%NF+2)
#else
    #if %DID=0
     1 1 (%NF+1)
     2 1 (3*%NF/2+1)
     3 (%NF+1) (3*%NF/2+1)
    #else
     1 1 (%NF/2+1)
     2 (%NF/2+1) (%NF+1)
     3 1 (3*%NF/2+1)
     4 (%NF+1) (3*%NF/2+1)
    #endif
     #if %UP = 1
      100r(%NF/2-2) 2 (%NF+3)
      (100+%NF/2-1)r(%NF/2-2) (%NF)p-1 (2*%NF-1)p-1
     #else
      100r(%NF/2-2) 3 (%NF+2)
      (100+%NF/2-1)r(%NF/2-2) (%NF-1)p-1 (2*%NF)p-1
     #endif
     200r(%NF-2) 2 (%NF+2)
#endif
CAR
ACIER
#if %MEMB = 0
     1a (%NF)                 %CHORL "gamma" %CHORLgamma
     (%NF+1)                  %CHORU "gamma" %CHORUgamma
     (%NF+2)a (2*%NF-1)       %CHORU "gamma" %CHORUgamma
     (2*%NF)                  %CHORU "gamma" %CHORUgamma
     (2*%NF+1)a (5*%NF/2-1)   %DIAGS "gamma" %DIAGSgamma
     (2*%NF+%NF/2)a (3*%NF-2) %DIAGS "gamma" %DIAGSgamma
     (3*%NF+1)a (4*%NF-1)     %POSTS "gamma" %POSTSgamma
#else
    #if %DID=0
     1 %CHORL "gamma" %CHORLgamma
     2 3 %CHORU "gamma" %CHORUgamma
    #else
     1 2 %CHORL "gamma" %CHORLgamma
     3 4 %CHORU "gamma" %CHORUgamma
    #endif
     #if %UP = 1
      100a(100+%NF-3) %DIAGS "gamma" %DIAGSgamma
     #else
      100a(100+%NF-3) %DIAGS "gamma" %DIAGSgamma
     #endif
     200a(200+%NF-2) %POSTS "gamma" %POSTSgamma
#endif
    REL
   #if %REL = 1
#if %MEMB = 0
    ELE 1a (%NF)                 ORI ry  EXT ry
    ELE (%NF+1)                  ORI ry  EXT ry
    ELE (%NF+2)a (2*%NF-1)       ORI ry  EXT ry
    ELE (2*%NF)                  ORI ry  EXT ry
    ELE (2*%NF+1)a (5*%NF/2-1)   ORI ry  EXT ry
    ELE (2*%NF+%NF/2)a (3*%NF-2) ORI ry  EXT ry
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    ELE (3*%NF+1)a (4*%NF-1)      ORI ry  EXT ry
#else
    #if %DID=0
     ELE 1 ORI ry  EXT ry
     ELE 2 3 ORI ry  EXT ry
    #else
     ELE 1 2 ORI ry  EXT ry
     ELE 3 4 ORI ry  EXT ry
    #endif
     #if %UP = 1
      ELE 100a(100+%NF-3) ORI ry  EXT ry
     #else
      ELE 100a(100+%NF-3) ORI ry  EXT ry
     #endif
     ELE 200a(200+%NF-2) ORI ry  EXT ry
#endif
   #endif
  APP
FIN
;-----
APP
1 (%NF+1)
CHA
CAS # 1
(%NF+2)a(2*%NF) Fz=-1.0
FIN
```