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FINISH
/CLEAR
C*****
*****
C***
C*** RUOTA ANALIZZATA CON ELEMENTI DI FOURIER
C***
C*** PARAMETRI
C***
/PREP7
DA=90          ! diametro albero
DM=130         ! diametro mozzo
DB=350         ! diametro anello esterno
DR=400         ! diametro ruota
LA= 200        ! lunghezza albero
LM=130         ! lunghezza mozzo
LR=120         ! lunghezza anello esterno
RR=15          ! raggio raccordo
SC=50          ! spessore cartella
FR=20000       ! carico
*ASK,NFOU,N° termini nello sviluppo in serie di Fourier : ,25
C***
C*** KEYPOINTS
C***
K,1,
K,2,DA/2
K,3,DA/2,LA/2
K,4,0,LA/2
K,5,DR/2
K,6,DR/2,LR/2
K,7,DB/2,LR/2
K,8,DB/2,SC/2
K,9,DM/2,SC/2
K,10,DM/2,LM/2
K,11,DA/2,LM/2
C***
C*** LINEE
C***
L,1,2
L,2,11
L,11,3
L,3,4
L,4,1
L,2,5
L,5,6
L,6,7
L,7,8
L,8,9
L,9,10
L,10,11
C***
C*** RACCORDI
C***
LSEL,,LOC,X,DM/2+0.1,DB/2-0.1
LSEL,R,LOC,Y,0.1,SC/2+0.1
*GET,NL1,LINE,,NUM,MAX
LSEL,,LOC,X,DB/2-0.1,DB/2+0.1
LSEL,R,LOC,Y,SC/2-0.1,LR/2+0.1
*GET,NL2,LINE,,NUM,MAX
LSEL,ALL
LFILLT,NL1,NL2,RR
LSEL,,LOC,X,DM/2-0.1,DM/2+0.1
LSEL,R,LOC,Y,SC/2-0.1,LM/2+0.1

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*GET,NL2,LINE,,NUM,MAX
LSEL,ALL
LFILLT,NL1,NL2,RR
C***
C*** AREE
C***
LSEL,,LOC,X,DA/2-0.1,99999
LSEL,R,LOC,Y,-0.1,LM/2+0.01
AL,ALL
LSEL,,LOC,X,-0.1,DA/2+0.01
AL,ALL
C***
C*** ELEMENTI
C***
ET,1,25
SMRTSIZE,3
AMESH,ALL
C***
C*** VINCOLI
C***
LSEL,,LOC,Y,-0.1,0.01
DL,ALL,,UY,0
LSEL,ALL
LSEL,,LOC,X,-0.01,0.01
DL,ALL,,UX,0
LSEL,ALL
DK,2,UZ,0
C***
C*** CARICHI
C***
MP,EX,1,210000
FINISH
/SOLU
*DO,IJK,1,NFOU,1
SFLDELE,ALL,ALL
C*** DEFINIZIONE ARMONICA
MODE,IJK-1,1
LSEL,,LOC,X,DR/2-0.01,DR/2+0.1
*IF,IJK,LE,1,THEN
        SFL,ALL,PRES,FR/LR/(2*3.14157*DR/2)
*ELSE
        SFL,ALL,PRES,FR/LR/(3.14157*DR/2)
*ENDIF
LSEL,ALL
C*** SOLUZIONE
SOLVE
*ENDDO
FINISH
C***
C*** POST-PROCESSING
C***
/POST1
LCSUM,ALL
C***
C*** OPZIONI DI RAPPRESENTAZIONE
C***
C*** scelta oggetti da rappresentare
/PBC,ALL,,1
/PBC,NFOR,,0
/PBC,NMOM,,0
/PBC,RFOR,,0
/PBC,PATH,,0
/PNUM,NODE,0

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/PSF,PRESS,NORM,2
C*** scelta disposizione finestra/legenda
/PLOPTS,INFO,2
C*** scelta colori
/COLOR,PBAK,OFF
C*** rappresenta la struttura indeformata
/DSCALE,,OFF
C***
C*** COMBINAZIONE CASI DI CARICO PER OTTENERE IL RISULTATO FINALE
C***
*DO,IJK,1,NFOU,1
      SET,IJK
      LCWRITE,IJK
*ENDDO
LCASE,1
*DO,IJK,2,NFOU,1
      ESEL,ALL
      LCOPER,ADD,IJK
      NSEL,,LOC,X,(DA+DM)/4,(DB+DR)/4
      ESLN,,1
      /TITLE, ARMONICHE DA 1 A %IJK%
      PLNSTR,S,X
*ASK,IFL,Premere un tasto per continuare,0
      PLNSTR,S,EQV
*ASK,IFL,Premere un tasto per continuare,0
      NSEL,,LOC,X,DB/2-RR-0.001,DB/2-RR+0.001
      NSEL,R,LOC,Y,SC/2-0.001,SC/2+0.001
      NSEL,R,LOC,Z,-0.0001,0.0001
      /OUTPUT,RUOTAFOURIER,TXT,,APPEND
      A=IJK
      PRNSOL,S,COMP
      PRNSOL,S,PRIN
      /OUTPUT,TERM
      NSEL,ALL
      ESEL,ALL
*ENDDO

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