

Table A3 List of the file, **begin.new**.

This file is entirely generated by GENOPT automatically.

The "end" user provides the starting design and other information during interactive execution of the GENOPT processor, BEGIN.

=====

C=DECK BEGIN

C

C PURPOSE IS TO SET UP DATA FOR A STARTING DESIGN.

C

C ***** NOTE NOTE NOTE NOTE NOTE NOTE *****

C

C The BEGIN.NEW source library is completely provided by GENOPT. You

C do not have to modify BEGIN.NEW at all.

C

C ***** END NOTE *****

C

 PROGRAM BEGIN

C

 COMMON/PRMFIL/IFILE,IFILE2,IOUT,IPRM(5)

 COMMON/PRMOUT/IFILE3,IFILE4,IFILE8,IFILE9,IFIL11

 COMMON/INDAT/INFILE

 COMMON/BEHNEG/ICONSW(99)

 COMMON/NUMPR3/NCAR0

 COMMON/NUMPR2/ILAR,ICAR,IOAR,IFACT,NCASES,NPRINT

 COMMON/WORDS3/WORDF(50),WORDB(99),WORDOB(50),WORDS(99)

 CHARACTER*80 WORDF,WORDB,WORDOB,WORDS

 COMMON/WORDS7/WORDB0(99)

 CHARACTER*80 WORDB0

 character*4 QUAL

 CHARACTER*28 CASE,CASE0

 CHARACTER*32 CASE1,CASE2,CASE3,CASE4

#if cnvx

 external signal_handler

 integer dummying, signal

 dummyint = signal(2, signal_handler, -1)

#endif

#if sgi

 integer signal_handler

 external signal_handler

 integer dummyint, signal

 dummyint = signal(2, signal_handler, -1)

#endif

#if star

 integer signal_handler

 external signal_handler

 call signal(2, signal_handler)

#endif

C

```

C  ESTABLISH NAME FOR THE PROMPT FILE...
C
  4  CONTINUE
    WRITE(6,1001)
1001 FORMAT('/' THE NAME OF THE PROMPT FILE ASKED FOR NEXT'/
1' IS THE NAME OF THE CLASS OF PROBLEMS THAT THE GENOPT-USER'/
1' HAS CHOSEN, NOT THE NAME OF THE PARTICULAR CASE BEING'/
1' STUDIED HERE. IT IS THE "NAME" PART OF "NAME".PRO.'/)
C
    CALL CASGEN(5,CASE0)
    I=INDEX(CASE0,' ')
    IF(I.NE.0) THEN
      CASE1=CASE0(:I-1)//'.PRO'
    ELSE
      CASE1=CASE0//'.PRO'
    ENDIF
    MLET = I - 1
    IF (I.EQ.0) MLET = 28
C
C  ESTABLISH NAME FOR THE CASE...
C
    WRITE(6,1004)
1004 FORMAT('/' FROM HERE ON, WHENEVER THE CASE NAME IS REQUESTED,'/
1' YOU PROVIDE THE NAME OF THE PARTICULAR INSTANCE IN THE CLASS'/
1' OF PROBLEMS THAT YOU ARE NOW STUDYING. THIS NAME MUST BE'/
1' DIFFERENT FROM THE NAME YOU HAVE JUST PROVIDED ABOVE.'/)
C
    CALL CASSPC(5,CASE)
    I=INDEX(CASE,' ')
    IF(I.NE.0) THEN
      CASE2=CASE(:I-1)//'.OPB'
      CASE3=CASE(:I-1)//'.CBL'
      CASE4=CASE(:I-1)//'.NAM'
    ELSE
      CASE2=CASE//'.OPB'
      CASE3=CASE//'.CBL'
      CASE4=CASE//'.NAM'
    ENDIF
    NLET = I - 1
    IF (I.EQ.0) NLET = 28
    IF (CASE(1:NLET).EQ.CASE0(1:MLET)) THEN
      WRITE(6,*)
1 ' SPECIFIC CASE MUST HAVE A DIFFERENT NAME FROM GENERIC CASE.'
      WRITE(6,*) ' PLEASE TRY AGAIN.'
      GO TO 4
    ENDIF
C
    IFILE = 2

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        IFILE4= 4
        IFILE7= 7
        IFILE8 = 8
        IFILE9 = 9
        IFIL11= 11
C
        IOUTFL = 3
C
C BEG VMS
C     OPEN(UNIT=2,FILE=CASE1,STATUS='OLD',READONLY)
C     OPEN(UNIT=4,FILE='GENOPT:TUTORBEG.DAT',STATUS='OLD',READONLY)
C     OPEN(UNIT=11,FILE='GENOPT:URPROMPT.DAT',STATUS='OLD',READONLY)
C END VMS
C BEG UNIX
        OPEN(UNIT=2,FILE=CASE1,STATUS='OLD')
C     OPEN(UNIT=4,FILE='GENOPT/TUTORBEG.DAT',STATUS='OLD')
        OPEN(UNIT=11,FILE='GENOPT/URPROMPT.DAT',STATUS='OLD')
C END UNIX
        OPEN(UNIT=3,FILE=CASE,STATUS='UNKNOWN')
        OPEN(UNIT=7,FILE=CASE3,STATUS='UNKNOWN',FORM='UNFORMATTED')
        OPEN(UNIT=8,FILE=CASE2,STATUS='UNKNOWN')
        OPEN(UNIT=9,FILE=CASE4,STATUS='UNKNOWN')
C
        WRITE(6,5) CASE(1:NLET),CASE(1:NLET),CASE(1:NLET),CASE(1:NLET),
1          CASE(1:NLET),CASE(1:NLET),CASE(1:NLET)
        WRITE(IFILE8,'(A,A,A)')
1' ***** THIS IS THE ',CASE(1:NLET),
1' .OPB FILE *****'
        WRITE(IFILE8,5) CASE(1:NLET),CASE(1:NLET),CASE(1:NLET),
1  CASE(1:NLET),CASE(1:NLET),CASE(1:NLET),CASE(1:NLET)
5 FORMAT(//' ***** BEGIN *****'//
1' Purpose of BEGIN is to permit you to provide a starting design'/
1' in an interactive mode. You give starting dimensions, material'/
1' properties, allowables. The interactive session is stored on'/
1' a file called ',A,','BEG, in which ',A,' is a name that you'/
1' have chosen for the specific case. (The name, ',A,' must'/
1' remain the same as you use BEGIN, DECIDE, MAINSETUP, OPTIMIZE, '/
1' and CHANGE.) In future runs of the same or a'/
1' slightly modified case, you will find it convenient to use the'/
1' file ',A,','BEG as input. Rather than answer all the questions'/
1' interactively, you can use ',A,','BEG or an edited version of'/
1' ',A,','BEG as input to BEGIN. BEGIN also generates an output'/
1' file called ',A,','OPB. OPB lists a summary of the case, and if'/
1' you choose the tutorial option, the questions, helps, and your'/
1' answers for each input datum.'//
1' *****'/)
C
C STORE THE NAME OF THE CASE...

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C      WRITE(IFILE9,7) CASE
7  FORMAT(1X,A)
C
C      QUAL = '.BEG'
      CALL NFILE(IFIL11,INFILE,IOUT,QUAL,IPROMP,IFILE8,CASE,IOUTFL)
C
      CALL INPUT(IPROMP)
      CALL MOVERX(0,0,ICONSW,1,99)
C
      NCAR0 = ICAR
      DO 100 I = 1,99
          WORDB0(I) = WORDB(I)
100 CONTINUE
      CALL STORCM(IFILE7)
C
      WRITE(6,20) CASE(1:NLET),CASE(1:NLET),CASE(1:NLET),
1          CASE(1:NLET),CASE(1:NLET),CASE(1:NLET)
      IF (IPROMP.GT.1)
1  WRITE(IFILE8,20) CASE(1:NLET),CASE(1:NLET),CASE(1:NLET),
1          CASE(1:NLET),CASE(1:NLET),CASE(1:NLET)
20 FORMAT(//' DESCRIPTION OF FILES GENERATED BY THIS CASE: '//
1 1X,A,'.NAM = This file contains only the name of the case.'/
1 1X,A,'.BEG = Summary of interactive session you have just'/
1'          completed. This file can be edited and used for'/
1'          future runs of BEGIN.'//
1 1X,A,'.CBL = Contains the ',A,' data base.'//
1 1X,A,'.OPB = Output from BEGIN. Please list this file and'/
1'          inspect it and the ',A,'.BEG file carefully before'/
1'          proceeding.'//
1' For further information about files generated during operation'/
1' of GENOPT give the command HELPG FILES.'//
1' Next, give the command   DECIDE or CHANGE   .')
C
      WRITE(IFILE8,'(A,A,A)')
1' ***** END OF THE   ',CASE(1:NLET),
1' .OPB FILE *****'
      CLOSE(UNIT=IOUT)
      CLOSE(UNIT=7)
      CLOSE(UNIT=8)
      CLOSE(UNIT=9)
C
      END
C
C
C
C=DECK      GETVAR
            SUBROUTINE GETVAR(IARRAY,JARRAY,DATUM,IVAR,VAR,WORD)

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C
C INPUT DATA...
C
C IARRAY = 0 IF PARAMETER IS NOT AN ARRAY ELEMENT; NONZERO OTHERWISE
C JARRAY = 0 IF PARAMETER IS A SIMPLE VARIABLE OR ONE-D ARRAY;
C         NONZERO OTHERWISE
C DATUM  = THIS IS THE PARAMETER TO BE STORED IN VAR(IVAR). ITS
C         DEFINITION IS TO BE STORED IN WORD(IVAR)
C
C OUTPUT DATA...
C
C  IVAR  = PARAMETER INDEX
C   VAR  = DATUM IS STORED IN VAR(IVAR)
C  WORD  = PHRASE THAT IDENTIFIES VAR(IVAR)
C
COMMON/PWORD/PHRASE
COMMON/PWORD2/IBLANK
CHARACTER*80 PHRASE, WORD(*)
CHARACTER*2  CN,CN2
DIMENSION VAR(*)
C
IF(IARRAY.GE.10) THEN
    WRITE(CN,'(I2)') IARRAY
ELSE
    WRITE(CN,'(I1)') IARRAY
ENDIF
C
IF(JARRAY.GE.10) THEN
    WRITE(CN2,'(I2)') JARRAY
ELSE
    WRITE(CN2,'(I1)') JARRAY
ENDIF
C
IVAR = IVAR + 1
IF (IVAR.GT.99) THEN
    WRITE(6,*)' TOO MANY PARAMETERS. REDUCE NUMBER OF VARIABLES'
    WRITE(6,'(1X,A)') PHRASE(1:IBLANK)
C BEG AUG 1999
C   IF (IPROMP.GT.1) THEN
C       WRITE(6,*)' TOO MANY PARAMETERS. REDUCE NUMBER OF VARIABLES'
C       WRITE(6,'(1X,A)') PHRASE(1:IBLANK)
C   ENDIF
C END AUG 1999
    CALL ERREX
ENDIF
C
IF (IARRAY.EQ.0) WORD(IVAR) = PHRASE(1:IBLANK)
IF (IARRAY.NE.0.AND.JARRAY.EQ.0)

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1          WORD(IVAR) = PHRASE(1:IBLANK)//' ('//CN//') '
  IF (IARRAY.NE.0.AND.JARRAY.NE.0)
1          WORD(IVAR) = PHRASE(1:IBLANK)//' ('//CN//','//CN2//') '
  VAR(IVAR) = DATUM
C
  RETURN
  END
C
C
C
C=DECK      OUTVAR
          SUBROUTINE OUTVAR(NVAR,VAR,WORD,IADD,TITLE,IFILE4,LENGTH,IPR,ISUB,
1          ISTART)
C
C  PURPOSE IS TO LIST PARAMETERS AND DEFINITIONS
C
C  INPUT DATA...
C
C  NVAR  = NUMBER OF PARAMETERS
C  VAR   = VALUE OF PARAMETERS
C  WORD  = DEFINITIONS OF PARAMETERS
C  IADD  = ADDRESSES OF PARAMETERS: IADD(IVAR) = ILOOP + 10*ISEG +
C                                           100*ILAYER
C  TITLE = TITLE OF LIST
C
C  OUTPUT DATA...
C
C  NONE
C
          DIMENSION VAR(*),IADD(*),WORD(*),ISUB(*)
          CHARACTER*80 WORD
          CHARACTER*65 TITLE
          CHARACTER*80 PHRASE
          CHARACTER*12 NOTAPP
C
          NOTAPP = '    NOT APPLY'
          ILET  = INDEX(TITLE,'DESCRIBE BEHAVIOR')
          ILET2 = INDEX(TITLE,'MARGINS')
C          IF (IFILE4.NE.6) WRITE(IFILE4,5)
5          FORMAT(1H0)
          WRITE(IFILE4,'(1X,A)') TITLE
          IF (ILET.EQ.0.AND.ILET2.EQ.0) WRITE(IFILE4,10)
          IF (ILET.NE.0) WRITE(IFILE4,11)
          IF (ILET2.NE.0) WRITE(IFILE4,12)
10         FORMAT(' VAR.    CURRENT' /
1          ' NO.        VALUE              DEFINITION')
11         FORMAT(' BEH.    CURRENT' /
1          ' NO.        VALUE              DEFINITION')

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12 FORMAT(' MAR.    CURRENT' /
1      ' NO.      VALUE              DEFINITION')
C
DO 100 I = ISTART,NVAR
C
IF (ISUB(I).EQ.1) GO TO 100
C
DO 15 J = 1,80
15 PHRASE(J:J) = WORD(I)(J:J)
CALL BLANKX(PHRASE,ILONG)
IF (ILONG.GT.60) ILONG = 60
IF (IPR.EQ.1) THEN
    IF ((ILET.NE.0.OR.ILET2.NE.0).AND.VAR(I).EQ.0.) THEN
        WRITE(IFILE4,20) I,NOTAPP,PHRASE(1:ILONG)
20     FORMAT(I3,1X,A12,2X,A)
    ELSE
        WRITE(IFILE4,22) I,VAR(I),PHRASE(1:ILONG)
22     FORMAT(I3,1X,1PE12.3,2X,A)
    ENDIF
ELSE
    IF ((ILET.NE.0.OR.ILET2.NE.0).AND.VAR(I).EQ.0.) THEN
        WRITE(IFILE4,20) I,NOTAPP,PHRASE(1:ILONG)
    ELSE
        WRITE(IFILE4,22) I,VAR(I),PHRASE(1:ILONG)
    ENDIF
ENDIF
ENDIF
C
100 CONTINUE
C
RETURN
END
C
C
C
C=DECK      INPUT
SUBROUTINE INPUT(IPROMP)
C
C YOU PROVIDE INTERACTIVELY GEOMETRY AND MATERIAL PROPERTIES FOR THE
C PANEL
C
COMMON/PRMFI/IFILE,IFILE2,IOUT,IPRM(5)
COMMON/PRMOUT/IFILE3,IFILE4,IFILE8,IFILE9,IFIL11
COMMON/INDAT/INFILE
COMMON/LWRUPR/VLB(50),VUB(50),CLINK(50,5),VLINK(50),VBV(99)
COMMON/NUMPAR/IPAR,IVAR,IALLOW,ICONST,NDEC,NLINK,NESCAP,ITYPE
COMMON/PARAMS/PAR(99),VAR(50),ALLOW(99),CONST(99),DEC(50),ESC(50)
COMMON/WORDS1/WORDP(99),WORDV(50),WORDA(99),WORDC(99),WORDD(50)
COMMON/WORDS2/WORDL(50),WORDE(50),WORDIQ(20)

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COMMON/OPTVAR/IDV(50),ILV(50),IDLINK(50,5),IEV(50),JTERMS(20)
COMMON/NUMPR2/ILAR,ICAR,IOAR,IFACT,NCASES,NPRINT
COMMON/PARAM2/FLAR(50),CAR(99),OAR(50),FSAFE(99),CPWR(50,5)
COMMON/PARAM3/CINEQ(15,20),DPWREQ(15,20)
COMMON/PARAM4/IDINEQ(15,20),NINEQ,JINEQ(20),IEQTYP(20)
COMMON/WORDS3/WORDF(50),WORDB(99),WORDOB(50),WORDS(99)
COMMON/PLOTCD/ITRTOT,ITER,OBPLOT(30),CPLOT(99,30),DPLOT(50,30)
COMMON/GRADMZ/GRADMX(30)
COMMON/IAUTOX/IAUTOX,ITIGHT,IITIGH(3),ITRMIN(3),IDESGN
COMMON/PWORD/PHRASE
COMMON/PWORD2/IBLANK
COMMON/ITRSNX/ITRSEN,ITRALL,IRESET

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C

C INSERT ADDITIONAL COMMON BLOCKS HERE:

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COMMON/FV01/xinput(21),Ixinput
REAL xinput
COMMON/FV02/ainput,binput,xlimit,SPACNG,THSTIF,THKCYL,RADCYL
REAL ainput,binput,xlimit,SPACNG,THSTIF,THKCYL,RADCYL
COMMON/FV05/THKSKN(21),HIGHST(21)
REAL THKSKN,HIGHST
COMMON/FV16/PRESS(20)
REAL PRESS
COMMON/FV19/CLAPS1(20),CLAPS1A(20),CLAPS1F(20)
REAL CLAPS1,CLAPS1A,CLAPS1F
COMMON/FV22/GENBK1(20),GENBK1A(20),GENBK1F(20)
REAL GENBK1,GENBK1A,GENBK1F
COMMON/FV25/SKNBK1(20,10),JSKNBK1,SKNBK1A(20,10),SKNBK1F(20,10)
REAL SKNBK1,SKNBK1A,SKNBK1F
COMMON/FV28/STFBK1(20,10),STFBK1A(20,10),STFBK1F(20,10)
REAL STFBK1,STFBK1A,STFBK1F
COMMON/FV31/SKNST1(20,10),SKNST1A(20,10),SKNST1F(20,10)
REAL SKNST1,SKNST1A,SKNST1F
COMMON/FV34/STFST1(20,10),STFST1A(20,10),STFST1F(20,10)
REAL STFST1,STFST1A,STFST1F
COMMON/FV37/WAPEX1(20),WAPEX1A(20),WAPEX1F(20)
REAL WAPEX1,WAPEX1A,WAPEX1F
COMMON/FV40/CLAPS2(20),CLAPS2A(20),CLAPS2F(20)
REAL CLAPS2,CLAPS2A,CLAPS2F
COMMON/FV43/GENBK2(20),GENBK2A(20),GENBK2F(20)
REAL GENBK2,GENBK2A,GENBK2F
COMMON/FV46/SKNBK2(20,10),JSKNBK2,SKNBK2A(20,10),SKNBK2F(20,10)
REAL SKNBK2,SKNBK2A,SKNBK2F
COMMON/FV49/STFBK2(20,10),STFBK2A(20,10),STFBK2F(20,10)
REAL STFBK2,STFBK2A,STFBK2F
COMMON/FV52/SKNST2(20,10),SKNST2A(20,10),SKNST2F(20,10)
REAL SKNST2,SKNST2A,SKNST2F
COMMON/FV55/STFST2(20,10),STFST2A(20,10),STFST2F(20,10)
REAL STFST2,STFST2A,STFST2F

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COMMON/FV58/WAPEX2(20),WAPEX2A(20),WAPEX2F(20)
REAL WAPEX2,WAPEX2A,WAPEX2F
COMMON/IV01/npoint,nodes,IMODE
INTEGER npoint,nodes,IMODE
COMMON/FV11/LENCYL,WIMP,EMATL,NUMATL,DNMATL,WEIGHT
REAL LENCYL,WIMP,EMATL,NUMATL,DNMATL,WEIGHT

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C
CHARACTER*80 PHRASE
CHARACTER*80 WORDP,WORDV,WORDA,WORDC,WORDD,WORDL,WORDE
CHARACTER*80 WORDF,WORDB,WORDOB,WORDS,WORDIQ
character*4 CHARAC
c CHARACTER*4 ANSOUT,ANSWER
c CHARACTER*3 CJ
DIMENSION ISUB(100)
c LOGICAL ANSL1
C

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```

IRESET = 0
ITRALL = 0
ITRSEN = 0
LTMAX = 0
IVAR = 0
IPAR = 0
IALLOW= 0
ILAR = 0
ICAR = 0
IOAR = 0
ICONST= 0
ITRTOT = 0
ITER = 0
IFACT = 0
IVMAX = 50
IPMAX = 99
IAMAX = 99
IFMAX = 99
ICMAX = 99
ILMAX = 50
CALL MOVERX(0,0,ISUB,1,100)
CALL MOVERX(0.,0,OBPLOT,1,30)
CALL MOVERX(0.,0.,GRADMX,1,30)
IAUTOC = 0
ITIGHT = 0
IITIGH(1) = 0
IITIGH(2) = 0
IITIGH(3) = 0
ITRMIN(1) = 100000
ITRMIN(2) = 100000
ITRMIN(3) = 100000
CALL MOVERX(0.,0,CPLOT,1,2970)

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CALL MOVERX(0.,0,DPLOT,1,1500)
C
CALL DATUM(IFIL11,93,0,0,INT,REALL,CHARAC,IOUT,0,0,0,IPROMP)
C
C INSERT THE PROGRAM FILE HERE:
CALL DATUM(IFILE, 5,0,0, INT, REALL,CHARAC,IOUT,0,0,0,IPROMP)
CALL DATUM(IFILE, 10,1,2,npoint , REALL,CHARAC,IOUT,0,0,0,IPROMP)
C
WRITE(6,'(A)')' '
WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, xinput = '
WRITE(6,'(A)')
1 ' vector element number for xinput'
WRITE(6,'(A)')' '
IF (IPROMP.GT.1) THEN
WRITE(IFILE8,'(A)')' '
WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, xinput = '
WRITE(IFILE8,'(A)')
1 ' vector element number for xinput'
WRITE(IFILE8,'(A)')' '
ENDIF
REWIND IFILE
CALL DATUM(IFILE, 15,1,1,Ixinput ,REALL,CHARAC,IOUT,0,0,0,IPROMP)
IF (Ixinput .EQ.0) GO TO 16
DO 15 I=1,Ixinput
REWIND IFILE
CALL DATUM(IFILE, 20,1,2,
1 INT,xinput(I),CHARAC, IOUT,I,0,1,IPROMP)
CALL GETVAR(I,0, xinput(I), IPAR, PAR,WORDP)
15 CONTINUE
16 CONTINUE
CALL DATUM(IFILE, 25,1,2, INT,ainput ,CHARAC,IOUT,0,0,0,IPROMP)
CALL GETVAR(0,0, ainput , IPAR, PAR,WORDP)
CALL DATUM(IFILE, 30,1,2, INT,binput ,CHARAC,IOUT,0,0,0,IPROMP)
CALL GETVAR(0,0, binput , IPAR, PAR,WORDP)
CALL DATUM(IFILE, 35,1,2,nodes , REALL,CHARAC,IOUT,0,0,0,IPROMP)
CALL DATUM(IFILE, 40,1,2, INT,xlimit ,CHARAC,IOUT,0,0,0,IPROMP)
CALL GETVAR(0,0, xlimit , IPAR, PAR,WORDP)
C
WRITE(6,'(A)')' '
WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, THKSKN = '
WRITE(6,'(A)')
1 ' vector element number for xinput'
WRITE(6,'(A)')' '
IF (IPROMP.GT.1) THEN
WRITE(IFILE8,'(A)')' '

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        WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, THKSKN = '
        WRITE(IFILE8,'(A)')
1  '  vector element number for xinput'
        WRITE(IFILE8,'(A)')' '
        ENDIF
        IF (Ixinput .EQ.0) GO TO 46
        DO 45 I=1,Ixinput
        REWIND IFILE
        CALL DATUM(IFILE, 45,1,2,
1      INT,THKSKN(I),CHARAC, IOUT,I,0,1,IPROMP)
        CALL GETVAR(I,0,      THKSKN(I),      IVAR,      VAR,WORDV)
45 CONTINUE
46 CONTINUE

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C

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        WRITE(6,'(A)')' '
        WRITE(6,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, HIGHST = '
        WRITE(6,'(A)')
1  '  vector element number for xinput'
        WRITE(6,'(A)')' '
        IF (IPROMP.GT.1) THEN
            WRITE(IFILE8,'(A)')' '
            WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, HIGHST = '
            WRITE(IFILE8,'(A)')
1  '  vector element number for xinput'
            WRITE(IFILE8,'(A)')' '
        ENDIF
        IF (Ixinput .EQ.0) GO TO 51
        DO 50 I=1,Ixinput
        REWIND IFILE
        CALL DATUM(IFILE, 50,1,2,
1      INT,HIGHST(I),CHARAC, IOUT,I,0,1,IPROMP)
        CALL GETVAR(I,0,      HIGHST(I),      IVAR,      VAR,WORDV)
50 CONTINUE
51 CONTINUE
        CALL DATUM(IFILE, 55,1,2,      INT,SPACNG      ,CHARAC,IOUT,0,0,0,IPROMP)
        CALL GETVAR(0,0,      SPACNG      ,      IVAR,      VAR,WORDV)
        CALL DATUM(IFILE, 60,1,2,      INT,THSTIF      ,CHARAC,IOUT,0,0,0,IPROMP)
        CALL GETVAR(0,0,      THSTIF      ,      IVAR,      VAR,WORDV)
        CALL DATUM(IFILE, 65,1,1,      INT,THKCYL      ,CHARAC,IOUT,0,0,0,IPROMP)
        CALL GETVAR(0,0,      THKCYL      ,      IPAR,      PAR,WORDP)
        CALL DATUM(IFILE, 70,1,1,      INT,RADCYL      ,CHARAC,IOUT,0,0,0,IPROMP)
        CALL GETVAR(0,0,      RADCYL      ,      IPAR,      PAR,WORDP)
        CALL DATUM(IFILE, 75,1,1,      INT,LENCYL      ,CHARAC,IOUT,0,0,0,IPROMP)
        CALL GETVAR(0,0,      LENCYL      ,      IPAR,      PAR,WORDP)
        CALL DATUM(IFILE, 80,1,2,      INT,WIMP        ,CHARAC,IOUT,0,0,0,IPROMP)

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CALL GETVAR(0,0,      WIMP      ,      IPAR,  PAR,WORDP)
CALL DATUM(IFILE, 85,1,1,      INT,EMATL  ,CHARAC,IOUT,0,0,0,IPROMP)
CALL GETVAR(0,0,      EMATL    ,      IPAR,  PAR,WORDP)
CALL DATUM(IFILE, 90,1,1,      INT,NUMATL  ,CHARAC,IOUT,0,0,0,IPROMP)
CALL GETVAR(0,0,      NUMATL   ,      IPAR,  PAR,WORDP)
CALL DATUM(IFILE, 95,1,2,      INT,DNMATL  ,CHARAC,IOUT,0,0,0,IPROMP)
CALL GETVAR(0,0,      DNMATL   ,      IPAR,  PAR,WORDP)
CALL DATUM(IFILE,100,1,2,IMODE    ,  REALL,CHARAC,IOUT,0,0,0,IPROMP)
MCASES = 1
CALL DATUM(IFILE,105,1,1,NCASES  ,REALL,CHARAC,IOUT,0,0,0,IPROMP)
IF (NCASES .EQ.0) GO TO 111
DO 110 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,110,1,1,
1      INT,PRESS(I),CHARAC,  IOUT,I,0,1,IPROMP)
CALL GETVAR(I,0,      PRESS(I),      ILAR,  FLAR,WORDF)
110 CONTINUE
111 CONTINUE

```

C

```

WRITE(6, '(A)') '      '
WRITE(6, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, CLAPS1 = '
WRITE(6, '(A)')
1 ' Number of load cases (number of environments) '
WRITE(6, '(A)') '      '
IF (IPROMP.GT.1) THEN
WRITE(IFILE8, '(A)') '      '
WRITE(IFILE8, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, CLAPS1 = '
WRITE(IFILE8, '(A)')
1 ' Number of load cases (number of environments) '
WRITE(IFILE8, '(A)') '      '
ENDIF
IF (NCASES .EQ.0) GO TO 116
DO 115 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,115,0,0,
1      INT,CLAPS1(I),CHARAC,  IOUT,I,0,1,IPROMP)
PHRASE =
1 'collapse pressure with imperfection mode 1: CLAPS1'
CALL BLANKX(PHRASE,IBLANK)
CALL GETVAR(I,0,      CLAPS1(I),      ICAR,  CAR,WORDB)
115 CONTINUE
116 CONTINUE

```

C

```

WRITE(6, '(A)') '      '
WRITE(6, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, CLAPS1A = '

```

```

WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
WRITE(6,'(A)')' '
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, CLAPS1A = '
    WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
    WRITE(IFILE8,'(A)')' '
ENDIF
IF (NCASES .EQ.0) GO TO 121
DO 120 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,120,1,1,
1 INT,CLAPS1A(I),CHARAC, IOUT,I,0,1,IPROMP)
CALL GETVAR(I,0, CLAPS1A(I),IALLOW,ALLOW,WORDA)
120 CONTINUE
121 CONTINUE

```

C

```

WRITE(6,'(A)')' '
WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, CLAPS1F = '
WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
WRITE(6,'(A)')' '
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, CLAPS1F = '
    WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
    WRITE(IFILE8,'(A)')' '
ENDIF
IF (NCASES .EQ.0) GO TO 126
DO 125 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,125,1,1,
1 INT,CLAPS1F(I),CHARAC, IOUT,I,0,1,IPROMP)
CALL GETVAR(I,0, CLAPS1F(I), IFACT,FSAFE,WORDS)
125 CONTINUE
126 CONTINUE

```

C

```

WRITE(6,'(A)')' '
WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, GENBK1 = '
WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '

```

```

WRITE(6,'(A)')'      '
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')'      '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, GENBK1 = '
    WRITE(IFILE8,'(A)')
1 '   Number of load cases (number of environments) '
    WRITE(IFILE8,'(A)')'      '
ENDIF
IF (NCASES .EQ.0) GO TO 131
DO 130 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,130,0,0,
1     INT,GENBK1(I),CHARAC,   IOUT,I,0,1,IPROMP)
PHRASE =
1 'general buckling load factor, mode 1: GENBK1'
CALL BLANKX(PHRASE,IBLANK)
CALL GETVAR(I,0,      GENBK1(I),   ICAR,  CAR,WORDB)
130 CONTINUE
131 CONTINUE

```

C

```

WRITE(6,'(A)')'      '
WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, GENBK1A = '
WRITE(6,'(A)')
1 '   Number of load cases (number of environments) '
WRITE(6,'(A)')'      '
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')'      '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, GENBK1A = '
    WRITE(IFILE8,'(A)')
1 '   Number of load cases (number of environments) '
    WRITE(IFILE8,'(A)')'      '
ENDIF
IF (NCASES .EQ.0) GO TO 136
DO 135 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,135,1,2,
1     INT,GENBK1A(I),CHARAC,   IOUT,I,0,1,IPROMP)
CALL GETVAR(I,0,      GENBK1A(I),IALLOW,ALLOW,WORDA)
135 CONTINUE
136 CONTINUE

```

C

```

WRITE(6,'(A)')'      '
WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, GENBK1F = '
WRITE(6,'(A)')

```

```

1 ' Number of load cases (number of environments) '
WRITE(6, '(A)') ' '
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8, '(A)') ' '
    WRITE(IFILE8, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, GENBK1F = '
    WRITE(IFILE8, '(A)')
1 ' Number of load cases (number of environments) '
    WRITE(IFILE8, '(A)') ' '
ENDIF
IF (NCASES .EQ.0) GO TO 141
DO 140 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,140,1,2,
1 INT,GENBK1F(I),CHARAC, IOUT,I,0,1,IPROMP)
CALL GETVAR(I,0, GENBK1F(I), IFACT,FSAFE,WORDS)
140 CONTINUE
141 CONTINUE
WRITE(6, '(A)') ' '
WRITE(6, '(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNBK1 = '
WRITE(6, '(A)')
1 ' number of regions for computing behavior'
WRITE(6, '(A)') ' '
REWIND IFILE
CALL DATUM(IFILE,145,1,1,JSKNBK1,REALL,CHARAC,IOUT,0,0,0,IPROMP)

C
IF (JSKNBK1.EQ.0) GO TO 151
DO 150 J=1,JSKNBK1
IF (JSKNBK1.GT.1) THEN
    WRITE(6, '(A)') ' '
    WRITE(6, '(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNBK1 = '
    WRITE(6, '(A)')
1 ' number of regions for computing behavior'
    WRITE(6, '(A)') ' '
    CALL CONVR2(J,CJ)
    WRITE(6, '(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNBK1'
    IF (IPROMP.GT.1) THEN
        WRITE(IFILE8, '(A)') ' '
        WRITE(IFILE8, '(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNBK1 = '
        WRITE(IFILE8, '(A)')
1 ' number of regions for computing behavior'
        WRITE(IFILE8, '(A)') ' '
        WRITE(IFILE8, '(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNBK1'

```

```

        ENDIF
    ENDIF
    WRITE(6, '(A)') '      '
    WRITE(6, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNBK1 = '
    WRITE(6, '(A)')
1 ' Number of load cases (number of environments) '
    WRITE(6, '(A)') '      '
    IF (IPROMP.GT.1) THEN
        WRITE(IFILE8, '(A)') '      '
        WRITE(IFILE8, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNBK1 = '
        WRITE(IFILE8, '(A)')
1 ' Number of load cases (number of environments) '
        WRITE(IFILE8, '(A)') '      '
    ENDIF
    IF (NCASES .EQ.0) GO TO 151
    DO 150 I=1, NCASES
        REWIND IFILE
        CALL DATUM(IFILE, 150, 0, 0,
1 INT, SKNBK1(I, J), CHARAC, IOUT, I, J, 2, IPROMP)
        PHRASE =
1 'local skin buckling load factor, mode 1: SKNBK1'
        CALL BLANKX(PHRASE, IBLANK)
        CALL GETVAR(I, J, SKNBK1(I, J), ICAR, CAR, WORDB)
150 CONTINUE
151 CONTINUE

```

C

```

    IF (JSKNBK1.EQ.0) GO TO 156
    DO 155 J=1, JSKNBK1
    IF (JSKNBK1.GT.1) THEN
        WRITE(6, '(A)') '      '
        WRITE(6, '(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNBK1A = '
        WRITE(6, '(A)')
1 ' number of regions for computing behavior'
        WRITE(6, '(A)') '      '
        CALL CONVR2(J, CJ)
        WRITE(6, '(A,A,A)')
1 ' INPUT FOR COL. NO. ', CJ, ' OF THE ARRAY SKNBK1A'
        IF (IPROMP.GT.1) THEN
            WRITE(IFILE8, '(A)') '      '
            WRITE(IFILE8, '(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNBK1A = '
            WRITE(IFILE8, '(A)')
1 ' number of regions for computing behavior'
            WRITE(IFILE8, '(A)') '      '
            WRITE(IFILE8, '(A,A,A)')

```



```

1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNBK1A'
  ENDIF
ENDIF
WRITE(6,'(A)')' '
WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNBK1A = '
WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
WRITE(6,'(A)')' '
IF (IPROMP.GT.1) THEN
  WRITE(IFILE8,'(A)')' '
  WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNBK1A = '
WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
WRITE(IFILE8,'(A)')' '
ENDIF
IF (NCASES .EQ.0) GO TO 156
DO 155 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,155,1,1,
1 INT,SKNBK1A(I,J),CHARAC,IOUT,I,J,2,IPROMP)
CALL GETVAR(I,J, SKNBK1A(I,J),IALLOW,ALLOW,WORDA)
155 CONTINUE
156 CONTINUE

```

C

```

IF (JSKNBK1.EQ.0) GO TO 161
DO 160 J=1,JSKNBK1
IF (JSKNBK1.GT.1) THEN
  WRITE(6,'(A)')' '
  WRITE(6,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNBK1F = '
WRITE(6,'(A)')
1 ' number of regions for computing behavior'
WRITE(6,'(A)')' '
CALL CONVR2(J,CJ)
WRITE(6,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNBK1F'
IF (IPROMP.GT.1) THEN
  WRITE(IFILE8,'(A)')' '
  WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNBK1F = '
WRITE(IFILE8,'(A)')
1 ' number of regions for computing behavior'
WRITE(IFILE8,'(A)')' '
WRITE(IFILE8,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNBK1F'
ENDIF

```

```

ENDIF
WRITE(6,'(A)')'    '
WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNBK1F = '
WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
WRITE(6,'(A)')'    '
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')'    '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNBK1F = '
WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
WRITE(IFILE8,'(A)')'    '
ENDIF
IF (NCASES .EQ.0) GO TO 161
DO 160 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,160,1,1,
1 INT,SKNBK1F(I,J),CHARAC,IOUT,I,J,2,IPROMP)
CALL GETVAR(I,J, SKNBK1F(I,J), IFACT,FSAFE,WORDS)
160 CONTINUE
161 CONTINUE

```

C

```

IF (JSKNBK1.EQ.0) GO TO 166
DO 165 J=1,JSKNBK1
IF (JSKNBK1.GT.1) THEN
    WRITE(6,'(A)')'    '
    WRITE(6,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFBK1 = '
WRITE(6,'(A)')
1 ' number of regions for computing behavior'
WRITE(6,'(A)')'    '
CALL CONVR2(J,CJ)
WRITE(6,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFBK1'
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')'    '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFBK1 = '
WRITE(IFILE8,'(A)')
1 ' number of regions for computing behavior'
WRITE(IFILE8,'(A)')'    '
WRITE(IFILE8,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFBK1'
ENDIF
ENDIF
WRITE(6,'(A)')'    '

```

```

WRITE(6, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFBK1 = '
WRITE(6, '(A)')
1 ' Number of load cases (number of environments) '
WRITE(6, '(A)')
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8, '(A)')
    WRITE(IFILE8, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFBK1 = '
WRITE(IFILE8, '(A)')
1 ' Number of load cases (number of environments) '
WRITE(IFILE8, '(A)')
ENDIF
IF (NCASES .EQ.0) GO TO 166
DO 165 I=1, NCASES
REWIND IFILE
CALL DATUM(IFILE, 165, 0, 0,
1 INT, STFBK1(I, J), CHARAC, IOUT, I, J, 2, IPROMP)
PHRASE =
1 'buckling load factor, isogrid member, mode 1: STFBK1'
CALL BLANKX(PHRASE, IBLANK)
CALL GETVAR(I, J, STFBK1(I, J), ICAR, CAR, WORDB)
165 CONTINUE
166 CONTINUE

```

C

```

IF (JSKNBK1.EQ.0) GO TO 171
DO 170 J=1, JSKNBK1
IF (JSKNBK1.GT.1) THEN
    WRITE(6, '(A)')
    WRITE(6, '(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFBK1A = '
WRITE(6, '(A)')
1 ' number of regions for computing behavior'
WRITE(6, '(A)')
CALL CONVR2(J, CJ)
WRITE(6, '(A,A,A)')
1 ' INPUT FOR COL. NO. ', CJ, ' OF THE ARRAY STFBK1A'
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8, '(A)')
    WRITE(IFILE8, '(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFBK1A = '
WRITE(IFILE8, '(A)')
1 ' number of regions for computing behavior'
WRITE(IFILE8, '(A)')
WRITE(IFILE8, '(A,A,A)')
1 ' INPUT FOR COL. NO. ', CJ, ' OF THE ARRAY STFBK1A'
ENDIF
ENDIF

```

```

WRITE(6,'(A)')'      '
WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFBK1A = '
WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
WRITE(6,'(A)')'      '
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')'      '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFBK1A = '
WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
WRITE(IFILE8,'(A)')'      '
ENDIF
IF (NCASES .EQ.0) GO TO 171
DO 170 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,170,1,1,
1 INT,STFBK1A(I,J),CHARAC,IOUT,I,J,2,IPROMP)
CALL GETVAR(I,J, STFBK1A(I,J),IALLOW,ALLOW,WORDA)
170 CONTINUE
171 CONTINUE

```

C

```

IF (JSKNBK1.EQ.0) GO TO 176
DO 175 J=1,JSKNBK1
IF (JSKNBK1.GT.1) THEN
    WRITE(6,'(A)')'      '
    WRITE(6,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFBK1F = '
WRITE(6,'(A)')
1 ' number of regions for computing behavior'
WRITE(6,'(A)')'      '
CALL CONVR2(J,CJ)
WRITE(6,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFBK1F'
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')'      '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFBK1F = '
WRITE(IFILE8,'(A)')
1 ' number of regions for computing behavior'
WRITE(IFILE8,'(A)')'      '
WRITE(IFILE8,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFBK1F'
ENDIF
ENDIF
WRITE(6,'(A)')'      '
WRITE(6,'(A)')

```

```

1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFBK1F = '
  WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
  WRITE(6,'(A)')' '
  IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFBK1F = '
  WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
  WRITE(IFILE8,'(A)')' '
  ENDIF
  IF (NCASES .EQ.0) GO TO 176
  DO 175 I=1,NCASES
  REWIND IFILE
  CALL DATUM(IFILE,175,1,1,
1 INT,STFBK1F(I,J),CHARAC,IOUT,I,J,2,IPROMP)
  CALL GETVAR(I,J, STFBK1F(I,J), IFACT,FSAFE,WORDS)
175 CONTINUE
176 CONTINUE

```

C

```

  IF (JSKNBK1.EQ.0) GO TO 181
  DO 180 J=1,JSKNBK1
  IF (JSKNBK1.GT.1) THEN
    WRITE(6,'(A)')' '
    WRITE(6,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNST1 = '
  WRITE(6,'(A)')
1 ' number of regions for computing behavior'
  WRITE(6,'(A)')' '
  CALL CONVR2(J,CJ)
  WRITE(6,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNST1'
  IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNST1 = '
  WRITE(IFILE8,'(A)')
1 ' number of regions for computing behavior'
  WRITE(IFILE8,'(A)')' '
  WRITE(IFILE8,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNST1'
  ENDIF
  ENDIF
  WRITE(6,'(A)')' '
  WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNST1 = '
  WRITE(6,'(A)')

```

```

1 ' Number of load cases (number of environments) '
WRITE(6,'(A)')' '
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNST1 = '
    WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
    WRITE(IFILE8,'(A)')' '
ENDIF
IF (NCASES .EQ.0) GO TO 181
DO 180 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,180,0,0,
1 INT,SKNST1(I,J),CHARAC,IOUT,I,J,2,IPROMP)
PHRASE =
1 'maximum stress in the shell skin, mode 1: SKNST1'
CALL BLANKX(PHRASE,IBLANK)
CALL GETVAR(I,J, SKNST1(I,J), ICAR, CAR,WORDB)
180 CONTINUE
181 CONTINUE

```

C

```

IF (JSKNBK1.EQ.0) GO TO 186
DO 185 J=1,JSKNBK1
IF (JSKNBK1.GT.1) THEN
    WRITE(6,'(A)')' '
    WRITE(6,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNST1A = '
    WRITE(6,'(A)')
1 ' number of regions for computing behavior'
    WRITE(6,'(A)')' '
    CALL CONVR2(J,CJ)
    WRITE(6,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNST1A'
    IF (IPROMP.GT.1) THEN
        WRITE(IFILE8,'(A)')' '
        WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNST1A = '
        WRITE(IFILE8,'(A)')
1 ' number of regions for computing behavior'
        WRITE(IFILE8,'(A)')' '
        WRITE(IFILE8,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNST1A'
    ENDIF
ENDIF
ENDIF
WRITE(6,'(A)')' '
WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNST1A = '

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```

WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
WRITE(6,'(A)')' '
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNST1A = '
    WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
    WRITE(IFILE8,'(A)')' '
ENDIF
IF (NCASES .EQ.0) GO TO 186
DO 185 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,185,1,1,
1 INT,SKNST1A(I,J),CHARAC,IOUT,I,J,2,IPROMP)
CALL GETVAR(I,J, SKNST1A(I,J),IALLOW,ALLOW,WORDA)
185 CONTINUE
186 CONTINUE

```

C

```

IF (JSKNBK1.EQ.0) GO TO 191
DO 190 J=1,JSKNBK1
IF (JSKNBK1.GT.1) THEN
    WRITE(6,'(A)')' '
    WRITE(6,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNST1F = '
    WRITE(6,'(A)')
1 ' number of regions for computing behavior'
    WRITE(6,'(A)')' '
    CALL CONVR2(J,CJ)
    WRITE(6,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNST1F'
    IF (IPROMP.GT.1) THEN
        WRITE(IFILE8,'(A)')' '
        WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNST1F = '
        WRITE(IFILE8,'(A)')
1 ' number of regions for computing behavior'
        WRITE(IFILE8,'(A)')' '
        WRITE(IFILE8,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNST1F'
    ENDIF
ENDIF
WRITE(6,'(A)')' '
WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNST1F = '
    WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '

```

```

WRITE(6, '(A)') '      '
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8, '(A)') '      '
    WRITE(IFILE8, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNST1F = '
    WRITE(IFILE8, '(A)')
1 ' Number of load cases (number of environments) '
    WRITE(IFILE8, '(A)') '      '
ENDIF
IF (NCASES .EQ.0) GO TO 191
DO 190 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,190,1,1,
1 INT,SKNST1F(I,J),CHARAC,IOUT,I,J,2,IPROMP)
CALL GETVAR(I,J, SKNST1F(I,J), IFACT,FSAFE,WORDS)
190 CONTINUE
191 CONTINUE

```

C

```

IF (JSKNBK1.EQ.0) GO TO 196
DO 195 J=1,JSKNBK1
IF (JSKNBK1.GT.1) THEN
    WRITE(6, '(A)') '      '
    WRITE(6, '(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFST1 = '
    WRITE(6, '(A)')
1 ' number of regions for computing behavior'
    WRITE(6, '(A)') '      '
    CALL CONVR2(J,CJ)
    WRITE(6, '(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFST1'
    IF (IPROMP.GT.1) THEN
        WRITE(IFILE8, '(A)') '      '
        WRITE(IFILE8, '(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFST1 = '
        WRITE(IFILE8, '(A)')
1 ' number of regions for computing behavior'
        WRITE(IFILE8, '(A)') '      '
        WRITE(IFILE8, '(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFST1'
    ENDIF
ENDIF
WRITE(6, '(A)') '      '
WRITE(6, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFST1 = '
    WRITE(6, '(A)')
1 ' Number of load cases (number of environments) '
    WRITE(6, '(A)') '      '
    IF (IPROMP.GT.1) THEN

```



```

        WRITE(IFILE8,'(A)')'      '
        WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFST1 = '
        WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
        WRITE(IFILE8,'(A)')'      '
    ENDIF
    IF (NCASES .EQ.0) GO TO 196
    DO 195 I=1,NCASES
    REWIND IFILE
    CALL DATUM(IFILE,195,0,0,
1 INT,STFST1(I,J),CHARAC,IOUT,I,J,2,IPROMP)
    PHRASE =
1 'maximum stress in isogrid stiffener, mode 1: STFST1'
    CALL BLANKX(PHRASE,IBLANK)
    CALL GETVAR(I,J, STFST1(I,J), ICAR, CAR,WORDB)
195 CONTINUE
196 CONTINUE

```

C

```

    IF (JSKNBK1.EQ.0) GO TO 201
    DO 200 J=1,JSKNBK1
    IF (JSKNBK1.GT.1) THEN
        WRITE(6,'(A)')'      '
        WRITE(6,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFST1A = '
        WRITE(6,'(A)')
1 ' number of regions for computing behavior'
        WRITE(6,'(A)')'      '
        CALL CONVR2(J,CJ)
        WRITE(6,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFST1A'
        IF (IPROMP.GT.1) THEN
            WRITE(IFILE8,'(A)')'      '
            WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFST1A = '
            WRITE(IFILE8,'(A)')
1 ' number of regions for computing behavior'
            WRITE(IFILE8,'(A)')'      '
            WRITE(IFILE8,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFST1A'
        ENDIF
    ENDIF
    WRITE(6,'(A)')'      '
    WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFST1A = '
    WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
    WRITE(6,'(A)')'      '

```

```

      IF (IPROMP.GT.1) THEN
        WRITE(IFILE8,'(A)') '      '
        WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFST1A = '
        WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
        WRITE(IFILE8,'(A)') '      '
      ENDIF
      IF (NCASES .EQ.0) GO TO 201
      DO 200 I=1,NCASES
      REWIND IFILE
      CALL DATUM(IFILE,200,1,1,
1      INT,STFST1A(I,J),CHARAC,IOUT,I,J,2,IPROMP)
      CALL GETVAR(I,J, STFST1A(I,J),IALLOW,ALLOW,WORDA)
200 CONTINUE
201 CONTINUE

```

C

```

      IF (JSKNBK1.EQ.0) GO TO 206
      DO 205 J=1,JSKNBK1
      IF (JSKNBK1.GT.1) THEN
        WRITE(6,'(A)') '      '
        WRITE(6,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFST1F = '
        WRITE(6,'(A)')
1 ' number of regions for computing behavior'
        WRITE(6,'(A)') '      '
        CALL CONVR2(J,CJ)
        WRITE(6,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFST1F'
        IF (IPROMP.GT.1) THEN
          WRITE(IFILE8,'(A)') '      '
          WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFST1F = '
          WRITE(IFILE8,'(A)')
1 ' number of regions for computing behavior'
          WRITE(IFILE8,'(A)') '      '
          WRITE(IFILE8,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFST1F'
        ENDIF
      ENDIF
      WRITE(6,'(A)') '      '
      WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFST1F = '
      WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
      WRITE(6,'(A)') '      '
      IF (IPROMP.GT.1) THEN
        WRITE(IFILE8,'(A)') '      '

```

```

        WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFST1F = '
        WRITE(IFILE8,'(A)')
1  ' Number of load cases (number of environments) '
        WRITE(IFILE8,'(A)')' '
    ENDIF
    IF (NCASES .EQ.0) GO TO 206
    DO 205 I=1,NCASES
    REWIND IFILE
    CALL DATUM(IFILE,205,1,1,
1      INT,STFST1F(I,J),CHARAC,IOUT,I,J,2,IPROMP)
    CALL GETVAR(I,J, STFST1F(I,J), IFACT,FSAFE,WORDS)
205 CONTINUE
206 CONTINUE

```

C

```

        WRITE(6,'(A)')' '
        WRITE(6,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, WAPEX1 = '
        WRITE(6,'(A)')
1  ' Number of load cases (number of environments) '
        WRITE(6,'(A)')' '
    IF (IPROMP.GT.1) THEN
        WRITE(IFILE8,'(A)')' '
        WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, WAPEX1 = '
        WRITE(IFILE8,'(A)')
1  ' Number of load cases (number of environments) '
        WRITE(IFILE8,'(A)')' '
    ENDIF
    IF (NCASES .EQ.0) GO TO 211
    DO 210 I=1,NCASES
    REWIND IFILE
    CALL DATUM(IFILE,210,0,0,
1      INT,WAPEX1(I),CHARAC, IOUT,I,0,1,IPROMP)
    PHRASE =
1  'normal (axial) displacement at apex, mode 1: WAPEX1'
    CALL BLANKX(PHRASE,IBLANK)
    CALL GETVAR(I,0, WAPEX1(I), ICAR, CAR,WORDB)
210 CONTINUE
211 CONTINUE

```

C

```

        WRITE(6,'(A)')' '
        WRITE(6,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, WAPEX1A = '
        WRITE(6,'(A)')
1  ' Number of load cases (number of environments) '
        WRITE(6,'(A)')' '
    IF (IPROMP.GT.1) THEN

```

```

        WRITE(IFILE8,'(A)')'      '
        WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, WAPEX1A = '
        WRITE(IFILE8,'(A)')
1  '  Number of load cases (number of environments) '
        WRITE(IFILE8,'(A)')'      '
    ENDIF
    IF (NCASES .EQ.0) GO TO 216
    DO 215  I=1,NCASES
    REWIND IFILE
    CALL DATUM(IFILE,215,1,1,
1      INT,WAPEX1A(I),CHARAC,  IOUT,I,0,1,IPROMP)
    CALL GETVAR(I,0,      WAPEX1A(I),IALLOW,ALLOW,WORDA)
215 CONTINUE
216 CONTINUE

```

C

```

        WRITE(6,'(A)')'      '
        WRITE(6,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, WAPEX1F = '
        WRITE(6,'(A)')
1  '  Number of load cases (number of environments) '
        WRITE(6,'(A)')'      '
    IF (IPROMP.GT.1) THEN
        WRITE(IFILE8,'(A)')'      '
        WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, WAPEX1F = '
        WRITE(IFILE8,'(A)')
1  '  Number of load cases (number of environments) '
        WRITE(IFILE8,'(A)')'      '
    ENDIF
    IF (NCASES .EQ.0) GO TO 221
    DO 220  I=1,NCASES
    REWIND IFILE
    CALL DATUM(IFILE,220,1,1,
1      INT,WAPEX1F(I),CHARAC,  IOUT,I,0,1,IPROMP)
    CALL GETVAR(I,0,      WAPEX1F(I), IFACT,FSAFE,WORDS)
220 CONTINUE
221 CONTINUE

```

C

```

        WRITE(6,'(A)')'      '
        WRITE(6,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, CLAPS2 = '
        WRITE(6,'(A)')
1  '  Number of load cases (number of environments) '
        WRITE(6,'(A)')'      '
    IF (IPROMP.GT.1) THEN
        WRITE(IFILE8,'(A)')'      '
        WRITE(IFILE8,'(A)')

```

```

1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, CLAPS2 = '
  WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
  WRITE(IFILE8,'(A)')' '
  ENDIF
  IF (NCASES .EQ.0) GO TO 226
  DO 225 I=1,NCASES
  REWIND IFILE
  CALL DATUM(IFILE,225,0,0,
1 INT,CLAPS2(I),CHARAC, IOUT,I,0,1,IPROMP)
  PHRASE =
1 'collapse pressure with imperfection mode 2: CLAPS2'
  CALL BLANKX(PHRASE,IBLANK)
  CALL GETVAR(I,0, CLAPS2(I), ICAR, CAR,WORDB)
225 CONTINUE
226 CONTINUE

```

C

```

  WRITE(6,'(A)')' '
  WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, CLAPS2A = '
  WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
  WRITE(6,'(A)')' '
  IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, CLAPS2A = '
  WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
  WRITE(IFILE8,'(A)')' '
  ENDIF
  IF (NCASES .EQ.0) GO TO 231
  DO 230 I=1,NCASES
  REWIND IFILE
  CALL DATUM(IFILE,230,1,1,
1 INT,CLAPS2A(I),CHARAC, IOUT,I,0,1,IPROMP)
  CALL GETVAR(I,0, CLAPS2A(I),IALLOW,ALLOW,WORDA)
230 CONTINUE
231 CONTINUE

```

C

```

  WRITE(6,'(A)')' '
  WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, CLAPS2F = '
  WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
  WRITE(6,'(A)')' '
  IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '

```

```

        WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, CLAPS2F = '
        WRITE(IFILE8,'(A)')
1  ' Number of load cases (number of environments) '
        WRITE(IFILE8,'(A)')' '
    ENDIF
    IF (NCASES .EQ.0) GO TO 236
    DO 235 I=1,NCASES
    REWIND IFILE
    CALL DATUM(IFILE,235,1,1,
1      INT,CLAPS2F(I),CHARAC, IOUT,I,0,1,IPROMP)
    CALL GETVAR(I,0,      CLAPS2F(I), IFACT,FSAFE,WORDS)
235 CONTINUE
236 CONTINUE

```

C

```

        WRITE(6,'(A)')' '
        WRITE(6,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, GENBK2 = '
        WRITE(6,'(A)')
1  ' Number of load cases (number of environments) '
        WRITE(6,'(A)')' '
    IF (IPROMP.GT.1) THEN
        WRITE(IFILE8,'(A)')' '
        WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, GENBK2 = '
        WRITE(IFILE8,'(A)')
1  ' Number of load cases (number of environments) '
        WRITE(IFILE8,'(A)')' '
    ENDIF
    IF (NCASES .EQ.0) GO TO 241
    DO 240 I=1,NCASES
    REWIND IFILE
    CALL DATUM(IFILE,240,0,0,
1      INT,GENBK2(I),CHARAC, IOUT,I,0,1,IPROMP)
    PHRASE =
1  'general buckling load factor, mode 2: GENBK2'
    CALL BLANKX(PHRASE,IBLANK)
    CALL GETVAR(I,0,      GENBK2(I), ICAR, CAR,WORDB)
240 CONTINUE
241 CONTINUE

```

C

```

        WRITE(6,'(A)')' '
        WRITE(6,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, GENBK2A = '
        WRITE(6,'(A)')
1  ' Number of load cases (number of environments) '
        WRITE(6,'(A)')' '
    IF (IPROMP.GT.1) THEN

```

```

        WRITE(IFILE8,'(A)')'      '
        WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, GENBK2A = '
        WRITE(IFILE8,'(A)')
1  '  Number of load cases (number of environments) '
        WRITE(IFILE8,'(A)')'      '
        ENDIF
        IF (NCASES .EQ.0) GO TO 246
        DO 245  I=1,NCASES
        REWIND IFILE
        CALL DATUM(IFILE,245,1,1,
1      INT,GENBK2A(I),CHARAC,  IOUT,I,0,1,IPROMP)
        CALL GETVAR(I,0,      GENBK2A(I),IALLOW,ALLOW,WORDA)
245 CONTINUE
246 CONTINUE

```

C

```

        WRITE(6,'(A)')'      '
        WRITE(6,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, GENBK2F = '
        WRITE(6,'(A)')
1  '  Number of load cases (number of environments) '
        WRITE(6,'(A)')'      '
        IF (IPROMP.GT.1) THEN
            WRITE(IFILE8,'(A)')'      '
            WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, GENBK2F = '
            WRITE(IFILE8,'(A)')
1  '  Number of load cases (number of environments) '
            WRITE(IFILE8,'(A)')'      '
        ENDIF
        IF (NCASES .EQ.0) GO TO 251
        DO 250  I=1,NCASES
        REWIND IFILE
        CALL DATUM(IFILE,250,1,2,
1      INT,GENBK2F(I),CHARAC,  IOUT,I,0,1,IPROMP)
        CALL GETVAR(I,0,      GENBK2F(I), IFACT,FSAFE,WORDS)
250 CONTINUE
251 CONTINUE
        WRITE(6,'(A)')'      '
        WRITE(6,'(A)')
1  ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNBK2 = '
        WRITE(6,'(A)')
1  '  number of regions for computing behavior'
        WRITE(6,'(A)')'      '
        REWIND IFILE
        CALL DATUM(IFILE,255,1,1,JSKNBK2,REALL,CHARAC,IOUT,0,0,0,IPROMP)
C
        IF (JSKNBK2.EQ.0) GO TO 261

```

```

DO 260 J=1,JSKNBK2
IF (JSKNBK2.GT.1) THEN
  WRITE(6,'(A)')' '
  WRITE(6,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNBK2 = '
  WRITE(6,'(A)')
1 ' number of regions for computing behavior'
  WRITE(6,'(A)')' '
  CALL CONVR2(J,CJ)
  WRITE(6,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNBK2'
  IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNBK2 = '
    WRITE(IFILE8,'(A)')
1 ' number of regions for computing behavior'
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNBK2'
  ENDIF
ENDIF
WRITE(6,'(A)')' '
WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNBK2 = '
  WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
  WRITE(6,'(A)')' '
  IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNBK2 = '
    WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
    WRITE(IFILE8,'(A)')' '
  ENDIF
IF (NCASES .EQ.0) GO TO 261
DO 260 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,260,0,0,
1 INT,SKNBK2(I,J),CHARAC,IOUT,I,J,2,IPROMP)
PHRASE =
1 'local skin buckling load factor, mode 2: SKNBK2'
CALL BLANKX(PHRASE,IBLANK)
CALL GETVAR(I,J, SKNBK2(I,J), ICAR, CAR,WORDB)
260 CONTINUE
261 CONTINUE

```



```

IF (JSKNBK2.EQ.0) GO TO 266
DO 265 J=1,JSKNBK2
IF (JSKNBK2.GT.1) THEN
  WRITE(6,'(A)') ' '
  WRITE(6,'(A)')
1  ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNBK2A = '
  WRITE(6,'(A)')
1  ' number of regions for computing behavior'
  WRITE(6,'(A)') ' '
  CALL CONVR2(J,CJ)
  WRITE(6,'(A,A,A)')
1  ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNBK2A'
  IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)') ' '
    WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNBK2A = '
    WRITE(IFILE8,'(A)')
1  ' number of regions for computing behavior'
    WRITE(IFILE8,'(A)') ' '
    WRITE(IFILE8,'(A,A,A)')
1  ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNBK2A'
  ENDIF
ENDIF
WRITE(6,'(A)') ' '
WRITE(6,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNBK2A = '
  WRITE(6,'(A)')
1  ' Number of load cases (number of environments) '
  WRITE(6,'(A)') ' '
  IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)') ' '
    WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNBK2A = '
    WRITE(IFILE8,'(A)')
1  ' Number of load cases (number of environments) '
    WRITE(IFILE8,'(A)') ' '
  ENDIF
IF (NCASES .EQ.0) GO TO 266
DO 265 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,265,1,1,
1  INT,SKNBK2A(I,J),CHARAC,IOUT,I,J,2,IPROMP)
CALL GETVAR(I,J, SKNBK2A(I,J),IALLOW,ALLOW,WORDA)
265 CONTINUE
266 CONTINUE

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C

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IF (JSKNBK2.EQ.0) GO TO 271
DO 270 J=1,JSKNBK2

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```

IF (JSKNBK2.GT.1) THEN
  WRITE(6,'(A)')' '
  WRITE(6,'(A)')
1  ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNBK2F = '
  WRITE(6,'(A)')
1  ' number of regions for computing behavior'
  WRITE(6,'(A)')' '
  CALL CONVR2(J,CJ)
  WRITE(6,'(A,A,A)')
1  ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNBK2F'
  IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNBK2F = '
    WRITE(IFILE8,'(A)')
1  ' number of regions for computing behavior'
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A,A,A)')
1  ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNBK2F'
  ENDIF
ENDIF
WRITE(6,'(A)')' '
WRITE(6,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNBK2F = '
  WRITE(6,'(A)')
1  ' Number of load cases (number of environments) '
  WRITE(6,'(A)')' '
  IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNBK2F = '
    WRITE(IFILE8,'(A)')
1  ' Number of load cases (number of environments) '
    WRITE(IFILE8,'(A)')' '
  ENDIF
IF (NCASES .EQ.0) GO TO 271
DO 270 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,270,1,1,
1  INT,SKNBK2F(I,J),CHARAC,IOUT,I,J,2,IPROMP)
CALL GETVAR(I,J, SKNBK2F(I,J), IFACT,FSAFE,WORDS)
270 CONTINUE
271 CONTINUE
C
IF (JSKNBK2.EQ.0) GO TO 276
DO 275 J=1,JSKNBK2
IF (JSKNBK2.GT.1) THEN
  WRITE(6,'(A)')' '

```

```

        WRITE(6,'(A)')
1      ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFBK2 = '
        WRITE(6,'(A)')
1    '  number of regions for computing behavior'
        WRITE(6,'(A)')
        CALL CONVR2(J,CJ)
        WRITE(6,'(A,A,A)')
1    '    INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFBK2'
        IF (IPROMP.GT.1) THEN
            WRITE(IFILE8,'(A)')
            WRITE(IFILE8,'(A)')
1      ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFBK2 = '
            WRITE(IFILE8,'(A)')
1    '  number of regions for computing behavior'
            WRITE(IFILE8,'(A)')
            WRITE(IFILE8,'(A,A,A)')
1    '    INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFBK2'
        ENDIF
    ENDIF
    WRITE(6,'(A)')
    WRITE(6,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFBK2 = '
    WRITE(6,'(A)')
1  '  Number of load cases (number of environments) '
    WRITE(6,'(A)')
    IF (IPROMP.GT.1) THEN
        WRITE(IFILE8,'(A)')
        WRITE(IFILE8,'(A)')
1  ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFBK2 = '
        WRITE(IFILE8,'(A)')
1  '  Number of load cases (number of environments) '
        WRITE(IFILE8,'(A)')
    ENDIF
    IF (NCASES .EQ.0) GO TO 276
    DO 275 I=1,NCASES
        REWIND IFILE
        CALL DATUM(IFILE,275,0,0,
1      INT,STFBK2(I,J),CHARAC,IOUT,I,J,2,IPROMP)
        PHRASE =
1  'buckling load factor for isogrid member, mode 2: STFBK2'
        CALL BLANKX(PHRASE,IBLANK)
        CALL GETVAR(I,J, STFBK2(I,J), ICAR, CAR,WORDB)
275 CONTINUE
276 CONTINUE
C
    IF (JSKNBK2.EQ.0) GO TO 281
    DO 280 J=1,JSKNBK2
        IF (JSKNBK2.GT.1) THEN

```

```

        WRITE(6,'(A)')'      '
        WRITE(6,'(A)')
1      ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFBK2A = '
        WRITE(6,'(A)')
1 ' number of regions for computing behavior'
        WRITE(6,'(A)')'      '
        CALL CONVR2(J,CJ)
        WRITE(6,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFBK2A'
        IF (IPROMP.GT.1) THEN
            WRITE(IFILE8,'(A)')'      '
            WRITE(IFILE8,'(A)')
1      ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFBK2A = '
            WRITE(IFILE8,'(A)')
1 ' number of regions for computing behavior'
            WRITE(IFILE8,'(A)')'      '
            WRITE(IFILE8,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFBK2A'
        ENDIF
    ENDIF
    WRITE(6,'(A)')'      '
    WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFBK2A = '
    WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
    WRITE(6,'(A)')'      '
    IF (IPROMP.GT.1) THEN
        WRITE(IFILE8,'(A)')'      '
        WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFBK2A = '
        WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
        WRITE(IFILE8,'(A)')'      '
    ENDIF
    IF (NCASES .EQ.0) GO TO 281
    DO 280 I=1,NCASES
    REWIND IFILE
    CALL DATUM(IFILE,280,1,1,
1      INT,STFBK2A(I,J),CHARAC,IOUT,I,J,2,IPROMP)
    CALL GETVAR(I,J,STFBK2A(I,J),IALLOW,ALLOW,WORDA)
280 CONTINUE
281 CONTINUE
C
    IF (JSKNBK2.EQ.0) GO TO 286
    DO 285 J=1,JSKNBK2
    IF (JSKNBK2.GT.1) THEN
        WRITE(6,'(A)')'      '
        WRITE(6,'(A)')

```

```

1      ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFBK2F = '
      WRITE(6,'(A)')
1      ' number of regions for computing behavior'
      WRITE(6,'(A)')' '
      CALL CONVR2(J,CJ)
      WRITE(6,'(A,A,A)')
1      ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFBK2F'
      IF (IPROMP.GT.1) THEN
        WRITE(IFILE8,'(A)')' '
        WRITE(IFILE8,'(A)')
1      ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFBK2F = '
        WRITE(IFILE8,'(A)')
1      ' number of regions for computing behavior'
        WRITE(IFILE8,'(A)')' '
        WRITE(IFILE8,'(A,A,A)')
1      ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFBK2F'
      ENDIF
    ENDIF
    WRITE(6,'(A)')' '
    WRITE(6,'(A)')
1      ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFBK2F = '
    WRITE(6,'(A)')
1      ' Number of load cases (number of environments) '
    WRITE(6,'(A)')' '
    IF (IPROMP.GT.1) THEN
      WRITE(IFILE8,'(A)')' '
      WRITE(IFILE8,'(A)')
1      ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFBK2F = '
      WRITE(IFILE8,'(A)')
1      ' Number of load cases (number of environments) '
      WRITE(IFILE8,'(A)')' '
    ENDIF
    IF (NCASES .EQ.0) GO TO 286
    DO 285 I=1,NCASES
      REWIND IFILE
      CALL DATUM(IFILE,285,1,1,
1      INT,STFBK2F(I,J),CHARAC,IOUT,I,J,2,IPROMP)
      CALL GETVAR(I,J, STFBK2F(I,J), IFACT,FSAFE,WORDS)
285 CONTINUE
286 CONTINUE

```

C

```

      IF (JSKNBK2.EQ.0) GO TO 291
      DO 290 J=1,JSKNBK2
      IF (JSKNBK2.GT.1) THEN
        WRITE(6,'(A)')' '
        WRITE(6,'(A)')
1      ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNST2 = '
        WRITE(6,'(A)')

```

```

1 '  number of regions for computing behavior'
  WRITE(6, '(A)') '    '
  CALL CONVR2(J,CJ)
  WRITE(6, '(A,A,A)')
1 '  INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNST2'
  IF (IPROMP.GT.1) THEN
    WRITE(IFILE8, '(A)') '    '
    WRITE(IFILE8, '(A)')
1 '  DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNST2 = '
    WRITE(IFILE8, '(A)')
1 '  number of regions for computing behavior'
    WRITE(IFILE8, '(A)') '    '
    WRITE(IFILE8, '(A,A,A)')
1 '  INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNST2'
  ENDIF
ENDIF
WRITE(6, '(A)') '    '
WRITE(6, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNST2 = '
  WRITE(6, '(A)')
1 ' Number of load cases (number of environments) '
  WRITE(6, '(A)') '    '
  IF (IPROMP.GT.1) THEN
    WRITE(IFILE8, '(A)') '    '
    WRITE(IFILE8, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNST2 = '
    WRITE(IFILE8, '(A)')
1 ' Number of load cases (number of environments) '
    WRITE(IFILE8, '(A)') '    '
  ENDIF
  IF (NCASES .EQ.0) GO TO 291
  DO 290 I=1,NCASES
  REWIND IFILE
  CALL DATUM(IFILE,290,0,0,
1 INT,SKNST2(I,J),CHARAC,IOUT,I,J,2,IPROMP)
  PHRASE =
1 'maximum stress in the shell skin, mode 2: SKNST2'
  CALL BLANKX(PHRASE,IBLANK)
  CALL GETVAR(I,J, SKNST2(I,J), ICAR, CAR,WORDB)
290 CONTINUE
291 CONTINUE

```

C

```

  IF (JSKNBK2.EQ.0) GO TO 296
  DO 295 J=1,JSKNBK2
  IF (JSKNBK2.GT.1) THEN
    WRITE(6, '(A)') '    '
    WRITE(6, '(A)')
1 '  DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNST2A = '

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```

        WRITE(6,'(A)')
1 '   number of regions for computing behavior'
        WRITE(6,'(A)')'   '
        CALL CONVR2(J,CJ)
        WRITE(6,'(A,A,A)')
1 '   INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNST2A'
        IF (IPROMP.GT.1) THEN
            WRITE(IFILE8,'(A)')'   '
            WRITE(IFILE8,'(A)')
1 '   DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNST2A = '
            WRITE(IFILE8,'(A)')
1 '   number of regions for computing behavior'
            WRITE(IFILE8,'(A)')'   '
            WRITE(IFILE8,'(A,A,A)')
1 '   INPUT FOR COL. NO. ',CJ,' OF THE ARRAY SKNST2A'
            ENDIF
        ENDIF
        WRITE(6,'(A)')'   '
        WRITE(6,'(A)')
1 '   DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNST2A = '
        WRITE(6,'(A)')
1 '   Number of load cases (number of environments) '
        WRITE(6,'(A)')'   '
        IF (IPROMP.GT.1) THEN
            WRITE(IFILE8,'(A)')'   '
            WRITE(IFILE8,'(A)')
1 '   DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNST2A = '
            WRITE(IFILE8,'(A)')
1 '   Number of load cases (number of environments) '
            WRITE(IFILE8,'(A)')'   '
        ENDIF
        IF (NCASES .EQ.0) GO TO 296
        DO 295 I=1,NCASES
            REWIND IFILE
            CALL DATUM(IFILE,295,1,1,
1 INT,SKNST2A(I,J),CHARAC,IOUT,I,J,2,IPROMP)
            CALL GETVAR(I,J, SKNST2A(I,J),IALLOW,ALLOW,WORDA)
295 CONTINUE
296 CONTINUE

```

C

```

        IF (JSKNBK2.EQ.0) GO TO 301
        DO 300 J=1,JSKNBK2
        IF (JSKNBK2.GT.1) THEN
            WRITE(6,'(A)')'   '
            WRITE(6,'(A)')
1 '   DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNST2F = '
            WRITE(6,'(A)')
1 '   number of regions for computing behavior'

```

```

        WRITE(6, '(A)') '      '
        CALL CONVR2(J,CJ)
        WRITE(6, '(A,A,A)')
1 '    INPUT FOR COL. NO. ', CJ, ' OF THE ARRAY SKNST2F'
    IF (IPROMP.GT.1) THEN
        WRITE(IFILE8, '(A)') '      '
        WRITE(IFILE8, '(A)')
1 '    ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, SKNST2F = '
        WRITE(IFILE8, '(A)')
1 '    number of regions for computing behavior'
        WRITE(IFILE8, '(A)') '      '
        WRITE(IFILE8, '(A,A,A)')
1 '    INPUT FOR COL. NO. ', CJ, ' OF THE ARRAY SKNST2F'
    ENDIF
ENDIF
WRITE(6, '(A)') '      '
WRITE(6, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNST2F = '
WRITE(6, '(A)')
1 '    Number of load cases (number of environments) '
WRITE(6, '(A)') '      '
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8, '(A)') '      '
    WRITE(IFILE8, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, SKNST2F = '
    WRITE(IFILE8, '(A)')
1 '    Number of load cases (number of environments) '
    WRITE(IFILE8, '(A)') '      '
ENDIF
IF (NCASES .EQ.0) GO TO 301
DO 300 I=1, NCASES
REWIND IFILE
CALL DATUM(IFILE, 300, 1, 1,
1 INT, SKNST2F(I, J), CHARAC, IOUT, I, J, 2, IPROMP)
CALL GETVAR(I, J, SKNST2F(I, J), IFACT, FSAFE, WORDS)
300 CONTINUE
301 CONTINUE
C
    IF (JSKNBK2.EQ.0) GO TO 306
    DO 305 J=1, JSKNBK2
    IF (JSKNBK2.GT.1) THEN
        WRITE(6, '(A)') '      '
        WRITE(6, '(A)')
1 '    ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFST2 = '
        WRITE(6, '(A)')
1 '    number of regions for computing behavior'
        WRITE(6, '(A)') '      '
        CALL CONVR2(J,CJ)

```



```

        WRITE(6, '(A,A,A)')
1 '    INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFST2'
    IF (IPROMP.GT.1) THEN
        WRITE(IFILE8, '(A)')' '
        WRITE(IFILE8, '(A)')
1 '    DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFST2 = '
        WRITE(IFILE8, '(A)')
1 '    number of regions for computing behavior'
        WRITE(IFILE8, '(A)')' '
        WRITE(IFILE8, '(A,A,A)')
1 '    INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFST2'
    ENDIF
ENDIF
WRITE(6, '(A)')' '
WRITE(6, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFST2 = '
WRITE(6, '(A)')
1 ' Number of load cases (number of environments) '
WRITE(6, '(A)')' '
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8, '(A)')' '
    WRITE(IFILE8, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFST2 = '
    WRITE(IFILE8, '(A)')
1 ' Number of load cases (number of environments) '
    WRITE(IFILE8, '(A)')' '
ENDIF
IF (NCASES .EQ.0) GO TO 306
DO 305 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,305,0,0,
1 INT,STFST2(I,J),CHARAC,IOUT,I,J,2,IPROMP)
PHRASE =
1 'maximum stress in isogrid stiffener, mode 2: STFST2'
CALL BLANKX(PHRASE,IBLANK)
CALL GETVAR(I,J, STFST2(I,J), ICAR, CAR,WORDB)
305 CONTINUE
306 CONTINUE

```

C

```

IF (JSKNBK2.EQ.0) GO TO 311
DO 310 J=1,JSKNBK2
IF (JSKNBK2.GT.1) THEN
    WRITE(6, '(A)')' '
    WRITE(6, '(A)')
1 '    DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFST2A = '
    WRITE(6, '(A)')
1 '    number of regions for computing behavior'
    WRITE(6, '(A)')' '

```

```

        CALL CONVR2(J,CJ)
        WRITE(6,'(A,A,A)')
1 '    INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFST2A'
    IF (IPROMP.GT.1) THEN
        WRITE(IFILE8,'(A)')' '
        WRITE(IFILE8,'(A)')
1 '    ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFST2A = '
        WRITE(IFILE8,'(A)')
1 '    number of regions for computing behavior'
        WRITE(IFILE8,'(A)')' '
        WRITE(IFILE8,'(A,A,A)')
1 '    INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFST2A'
    ENDIF
ENDIF
WRITE(6,'(A)')' '
WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFST2A = '
WRITE(6,'(A)')
1 '    Number of load cases (number of environments) '
WRITE(6,'(A)')' '
IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFST2A = '
    WRITE(IFILE8,'(A)')
1 '    Number of load cases (number of environments) '
    WRITE(IFILE8,'(A)')' '
ENDIF
IF (NCASES .EQ.0) GO TO 311
DO 310 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,310,1,1,
1 INT,STFST2A(I,J),CHARAC,IOUT,I,J,2,IPROMP)
CALL GETVAR(I,J, STFST2A(I,J),IALLOW,ALLOW,WORDA)
310 CONTINUE
311 CONTINUE

```

C

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    IF (JSKNBK2.EQ.0) GO TO 316
    DO 315 J=1,JSKNBK2
    IF (JSKNBK2.GT.1) THEN
        WRITE(6,'(A)')' '
        WRITE(6,'(A)')
1 '    ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFST2F = '
        WRITE(6,'(A)')
1 '    number of regions for computing behavior'
        WRITE(6,'(A)')' '
        CALL CONVR2(J,CJ)
        WRITE(6,'(A,A,A)')

```

```

1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFST2F'
  IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE COLUMN INDEX OF THE ARRAY, STFST2F = '
  WRITE(IFILE8,'(A)')
1 ' number of regions for computing behavior'
  WRITE(IFILE8,'(A)')' '
  WRITE(IFILE8,'(A,A,A)')
1 ' INPUT FOR COL. NO. ',CJ,' OF THE ARRAY STFST2F'
  ENDIF
ENDIF
WRITE(6,'(A)')' '
WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFST2F = '
WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
WRITE(6,'(A)')' '
IF (IPROMP.GT.1) THEN
  WRITE(IFILE8,'(A)')' '
  WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, STFST2F = '
  WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
  WRITE(IFILE8,'(A)')' '
ENDIF
IF (NCASES .EQ.0) GO TO 316
DO 315 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,315,1,1,
1 INT,STFST2F(I,J),CHARAC,IOUT,I,J,2,IPROMP)
CALL GETVAR(I,J, STFST2F(I,J), IFACT,FSAFE,WORDS)
315 CONTINUE
316 CONTINUE

```

C

```

  WRITE(6,'(A)')' '
  WRITE(6,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, WAPEX2 = '
  WRITE(6,'(A)')
1 ' Number of load cases (number of environments) '
  WRITE(6,'(A)')' '
  IF (IPROMP.GT.1) THEN
    WRITE(IFILE8,'(A)')' '
    WRITE(IFILE8,'(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, WAPEX2 = '
  WRITE(IFILE8,'(A)')
1 ' Number of load cases (number of environments) '
  WRITE(IFILE8,'(A)')' '

```

```

ENDIF
IF (NCASES .EQ.0) GO TO 321
DO 320 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,320,0,0,
1 INT,WAPEX2(I),CHARAC, IOUT,I,0,1,IPROMP)
PHRASE =
1 'normal (axial) displacement at apex, mode 2: WAPEX2'
CALL BLANKX(PHRASE,IBLANK)
CALL GETVAR(I,0, WAPEX2(I), ICAR, CAR,WORDB)
320 CONTINUE
321 CONTINUE

```

C

```

WRITE(6, '(A)') ' '
WRITE(6, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, WAPEX2A = '
WRITE(6, '(A)')
1 ' Number of load cases (number of environments) '
WRITE(6, '(A)') ' '
IF (IPROMP.GT.1) THEN
WRITE(IFILE8, '(A)') ' '
WRITE(IFILE8, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, WAPEX2A = '
WRITE(IFILE8, '(A)')
1 ' Number of load cases (number of environments) '
WRITE(IFILE8, '(A)') ' '
ENDIF
IF (NCASES .EQ.0) GO TO 326
DO 325 I=1,NCASES
REWIND IFILE
CALL DATUM(IFILE,325,1,1,
1 INT,WAPEX2A(I),CHARAC, IOUT,I,0,1,IPROMP)
CALL GETVAR(I,0, WAPEX2A(I), IALLOW, ALLOW,WORDA)
325 CONTINUE
326 CONTINUE

```

C

```

WRITE(6, '(A)') ' '
WRITE(6, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, WAPEX2F = '
WRITE(6, '(A)')
1 ' Number of load cases (number of environments) '
WRITE(6, '(A)') ' '
IF (IPROMP.GT.1) THEN
WRITE(IFILE8, '(A)') ' '
WRITE(IFILE8, '(A)')
1 ' DEFINITION OF THE ROW INDEX OF THE ARRAY, WAPEX2F = '
WRITE(IFILE8, '(A)')
1 ' Number of load cases (number of environments) '

```

```

        WRITE(IFILE8,'(A)') '      '
    ENDIF
    IF (NCASES .EQ.0) GO TO 331
    DO 330 I=1,NCASES
    REWIND IFILE
    CALL DATUM(IFILE,330,1,1,
1      INT,WAPEX2F(I),CHARAC,  IOUT,I,0,1,IPROMP)
    CALL GETVAR(I,0,      WAPEX2F(I), IFACT,FSAFE,WORDS)
330 CONTINUE
331 CONTINUE
    CALL DATUM(IFILE,335,0,0,  INT,WEIGHT ,CHARAC,IOUT,0,0,0,IPROMP)
    PHRASE =
1  'weight of the equivalent ellipsoidal head: WEIGHT'
    CALL BLANKX(PHRASE,IBLANK)
    CALL GETVAR(0,0,      WEIGHT ,      IOAR, OAR,WORDOB)
C
    CALL OUTVAR(IVAR,VAR,WORDV,IADDV,'PARAMETERS FROM WHICH DECISION V
1  VARIABLES CAN BE CHOSEN IN DECIDE ',IFILE8,80,1,ISUB,1)
C
    CALL OUTVAR(IPAR,PAR,WORDP,IADDP,'PARAMETERS WHICH ARE ALWAYS FIXE
1  D. NONE CAN BE DECISION VARIAB. ',IFILE8,80,1,ISUB,1)
C
    CALL OUTVAR(  ILAR, FLAR,WORDF,IADDA,'PARAMETERS WHICH ARE ENVIRON
1  MENTAL FACTORS (e.g. loads, temps.) ',IFILE8,80,1,ISUB,1)
C
    CALL OUTVAR(  ICAR,  CAR,WORDB,IADDA,'PARAMETERS WHICH DESCRIBE BE
1  HAVIOR (e.g. stress, buckling load) ',IFILE8,80,1,ISUB,1)
C
    CALL OUTVAR(IALLOW,ALLOW,WORDA,IADDA,'PARAMETERS WHICH ARE CLASSIF
1  IED AS ALLOWABLES (e.g. max. stress) ',IFILE8,80,1,ISUB,1)
C
    CALL OUTVAR( IFACT,FSAFE,WORDS,IADDA,'PARAMETERS WHICH ARE FACTORS
1  OF SAFETY                          ',IFILE8,80,1,ISUB,1)
C
    CALL OUTVAR(  IOAR, OAR,WORDOB,IADDA,'PARAMETER WHICH IS THE OBJEC
1  TIVE FUNCTION (e.g. minimum weight) ',IFILE8,80,1,ISUB,1)
C
C
    IVMORE = IVMAX - IVAR
    WRITE(6,*)' '
    WRITE(6,'(I4,A)') IVAR,
1      ' decision variable candidates have now been identified.'
    WRITE(6,'(I4,A)') IVMAX,
1      ' decision variable candidates are permitted.'
    WRITE(6,'(I4,A)') IVMORE,
1      ' additional decision variable candidates are allowed.'
    WRITE(6,*)' '
    WRITE(IFILE8,*)' '

```

```

WRITE(IFILE8,'(I4,A)') IVAR,
1      ' decision variable candidates have now been identified.'
WRITE(IFILE8,'(I4,A)') IVMAX,
1      ' decision variable candidates are permitted.'
WRITE(IFILE8,'(I4,A)') IVMORE,
1      ' additional decision variable candidates are allowed.'
WRITE(IFILE8,*)' '

```

C

```

IPMORE = IPMAX - IPAR
WRITE(6,'(I4,A)') IPAR,
1      ' fixed parameters have now been identified.'
WRITE(6,'(I4,A)') IPMAX, ' fixed parameters are permitted.'
WRITE(6,'(I4,A)') IPMORE,
1      ' additional fixed parameters are allowed.'
WRITE(6,*)' '
WRITE(IFILE8,'(I4,A)') IPAR,
1      ' fixed parameters have now been identified.'
WRITE(IFILE8,'(I4,A)') IPMAX, ' fixed parameters are permitted.'
WRITE(IFILE8,'(I4,A)') IPMORE,
1      ' additional fixed parameters are allowed.'
WRITE(IFILE8,*)' '

```

C

```

ILMORE = ILMAX - ILAR
WRITE(6,'(I4,A)') ILAR,
1      ' environmental parameters have now been identified.'
WRITE(6,'(I4,A)') ILMAX,
1      ' environmental parameters are permitted.'
WRITE(6,'(I4,A)') ILMORE,
1      ' additional environmental parameters are allowed.'
WRITE(6,*)' '
WRITE(IFILE8,'(I4,A)') ILAR,
1      ' environmental parameters have now been identified.'
WRITE(IFILE8,'(I4,A)') ILMAX,
1      ' environmental parameters are permitted.'
WRITE(IFILE8,'(I4,A)') ILMORE,
1      ' additional environmental parameters are allowed.'
WRITE(IFILE8,*)' '

```

C

```

IAMORE = IAMAX - IALLOW
WRITE(6,'(I4,A)') IALLOW, ' allowables have now been identified.'
WRITE(6,'(I4,A)') IAMAX, ' allowables are permitted.'
WRITE(6,'(I4,A)') IAMORE, ' additional allowables are permitted.'
WRITE(6,*)' '
WRITE(IFILE8,'(I4,A)') IALLOW,
1      ' allowables have now been identified.'
WRITE(IFILE8,'(I4,A)') IAMAX, ' allowables are permitted.'
WRITE(IFILE8,'(I4,A)') IAMORE,
1      ' additional allowables are permitted.'

```

```
WRITE(IFILE8,*)' '
```

C

```
IFMORE = IFMAX - IFACT
```

```
WRITE(6,'(I4,A)') IFACT,
```

```
1 ' factors of safety have now been identified.'
```

```
WRITE(6,'(I4,A)') IFMAX,
```

```
1 ' factors of safety are permitted.'
```

```
WRITE(6,'(I4,A)') IFMORE,
```

```
1 ' additional factors of safety are allowed.'
```

```
WRITE(6,*)' '
```

```
WRITE(IFILE8,'(I4,A)') IFACT,
```

```
1 ' factors of safety have now been identified.'
```

```
WRITE(IFILE8,'(I4,A)') IFMAX,
```

```
1 ' factors of safety are permitted.'
```

```
WRITE(IFILE8,'(I4,A)') IFMORE,
```

```
1 ' additional factors of safety are allowed.'
```

```
WRITE(IFILE8,*)' '
```

C

```
IERRX = 0
```

```
IF (IVMORE.LT.0) THEN
```

```
WRITE(6,*)
```

```
1 ' TOO MANY DECISION VARIABLE CANDIDATES. REDEFINE THE PROBLEM.'
```

```
IERRX = 1
```

```
ENDIF
```

```
IF (IPMORE.LT.0) THEN
```

```
WRITE(6,*)
```

```
1 ' YOU HAVE TOO MANY FIXED PARAMETERS. REDEFINE THE PROBLEM.'
```

```
IERRX = 1
```

```
ENDIF
```

```
IF (ILMORE.LT.0) THEN
```

```
WRITE(6,*)
```

```
1 ' TOO MANY ENVIRONMENTAL PARAMETERS. REDEFINE THE PROBLEM.'
```

```
IERRX = 1
```

```
ENDIF
```

```
IF (IAMORE.LT.0) THEN
```

```
WRITE(6,*)' YOU HAVE TOO MANY ALLOWABLES. REDEFINE THE PROBLEM.'
```

```
IERRX = 1
```

```
ENDIF
```

```
IF (IFMORE.LT.0) THEN
```

```
WRITE(6,*)' TOO MANY FACTORS OF SAFETY. REDEFINE THE PROBLEM.'
```

```
IERRX = 1
```

```
ENDIF
```

```
IF (IERRX.EQ.1) CALL ERREX
```

C

```
RETURN
```

```
END
```

C

C

```

C
C=DECK          SETUPC
          SUBROUTINE SETUPC(NVAR,VAR)
C
C  PURPOSE IS TO RECONSTRUCT COMMON BLOCKS CONTAINING DESIGN VARIABLES
C  THAT ARE CANDIDATES FOR DECISION VARIABLES FROM NVAR AND VAR.
C
          DIMENSION VAR(*)
C  INSERT ADDITIONAL COMMON BLOCKS HERE:
          COMMON/FV01/xinput(21),Ixinput
          REAL xinput
          COMMON/FV02/ainput,binput,xlimit,SPACNG,THSTIF,THKCYL,RADCYL
          REAL ainput,binput,xlimit,SPACNG,THSTIF,THKCYL,RADCYL
          COMMON/FV05/THKSKN(21),HIGHST(21)
          REAL THKSKN,HIGHST
          COMMON/FV16/PRESS(20)
          REAL PRESS
          COMMON/FV19/CLAPS1(20),CLAPS1A(20),CLAPS1F(20)
          REAL CLAPS1,CLAPS1A,CLAPS1F
          COMMON/FV22/GENBK1(20),GENBK1A(20),GENBK1F(20)
          REAL GENBK1,GENBK1A,GENBK1F
          COMMON/FV25/SKNBK1(20,10),JSKNBK1,SKNBK1A(20,10),SKNBK1F(20,10)
          REAL SKNBK1,SKNBK1A,SKNBK1F
          COMMON/FV28/STFBK1(20,10),STFBK1A(20,10),STFBK1F(20,10)
          REAL STFBK1,STFBK1A,STFBK1F
          COMMON/FV31/SKNST1(20,10),SKNST1A(20,10),SKNST1F(20,10)
          REAL SKNST1,SKNST1A,SKNST1F
          COMMON/FV34/STFST1(20,10),STFST1A(20,10),STFST1F(20,10)
          REAL STFST1,STFST1A,STFST1F
          COMMON/FV37/WAPEX1(20),WAPEX1A(20),WAPEX1F(20)
          REAL WAPEX1,WAPEX1A,WAPEX1F
          COMMON/FV40/CLAPS2(20),CLAPS2A(20),CLAPS2F(20)
          REAL CLAPS2,CLAPS2A,CLAPS2F
          COMMON/FV43/GENBK2(20),GENBK2A(20),GENBK2F(20)
          REAL GENBK2,GENBK2A,GENBK2F
          COMMON/FV46/SKNBK2(20,10),JSKNBK2,SKNBK2A(20,10),SKNBK2F(20,10)
          REAL SKNBK2,SKNBK2A,SKNBK2F
          COMMON/FV49/STFBK2(20,10),STFBK2A(20,10),STFBK2F(20,10)
          REAL STFBK2,STFBK2A,STFBK2F
          COMMON/FV52/SKNST2(20,10),SKNST2A(20,10),SKNST2F(20,10)
          REAL SKNST2,SKNST2A,SKNST2F
          COMMON/FV55/STFST2(20,10),STFST2A(20,10),STFST2F(20,10)
          REAL STFST2,STFST2A,STFST2F
          COMMON/FV58/WAPEX2(20),WAPEX2A(20),WAPEX2F(20)
          REAL WAPEX2,WAPEX2A,WAPEX2F
          COMMON/IV01/npoint,nodes,IMODE
          INTEGER npoint,nodes,IMODE
          COMMON/FV11/LENCYL,WIMP,EMATL,NUMATL,DNMATL,WEIGHT

```



```

      REAL LENCYL,WIMP,EMATL,NUMATL,DNMATL,WEIGHT
C
      IVAR = 1
C  PROGRAM FILE:
      IF (Ixinput .EQ.0) GO TO 46
      DO 45 I=1,Ixinput
      THKSKN(I) = VAR(IVAR)
      IVAR = IVAR + 1
45 CONTINUE
46 CONTINUE
      IF (Ixinput .EQ.0) GO TO 51
      DO 50 I=1,Ixinput
      HIGHST(I) = VAR(IVAR)
      IVAR = IVAR + 1
50 CONTINUE
51 CONTINUE
      SPACNG = VAR(IVAR)
      IVAR = IVAR + 1
      THSTIF = VAR(IVAR)
      IVAR = IVAR + 1
C
      RETURN
      END
=====

```