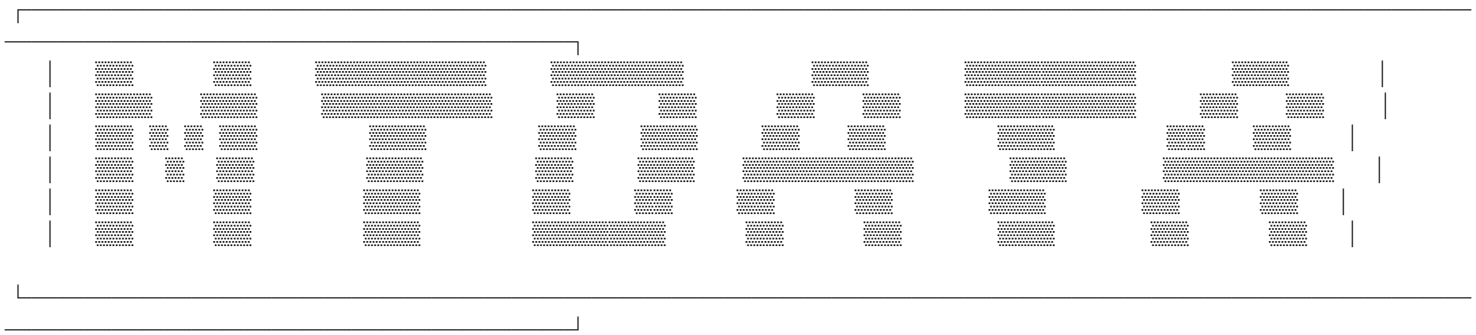

- THERMODYNAMICS AND PROCESS MODELLING GROUP -
- NPL MATERIALS CENTRE -
- NATIONAL PHYSICAL LABORATORY -

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VERSION 4.73 FOR LNX RH 7.3
2002-11-15

```
 ******************************
 * USING DEFAULT MTCONFIG FILE *
 ******************************
17 of 18 DATABASES ARE AVAILABLE

WHICH MODULE ? multiphase
MULTIPHASE OPTION ? define system !
ERROR IN OPENING DATAFILE
DEFINE WHAT ? system
ENTER <'SYSTEM ELEMENTS'> : Fe,Ni,Al,Mo,Nb,C^[[D^[[D^[[D
FE  KEYWORD NOT RECOGNISED
DEFINE WHAT ? 'Fe,Ni,Al,Mo,Nb,C' !
FE,NI,AL,MO,NB,C  KEYWORD NOT RECOGNISED
DEFINE WHAT ? system
ENTER <'SYSTEM ELEMENTS'> : 'Fe,Ni,Al,Mo,Nb,C !
DEFINE WHAT ? ?

DATA_INPUT_FILE
OUTPUT_DATA/RESULTS
SYSTEM
SOURCE
STOP

DEFINE WHAT ? system
ENTER <'SYSTEM ELEMENTS'> : 'Fe,Ni,Al,Mo,Nb,C' !

SEARCHING FOR SYSTEM Fe,Ni,Al,Mo,Nb,C

SEARCHING DATABASE(S) :
```

```
sgte_sol        - SGTE Solution Database 3.01 - 19/7/93

WARNING: BINARY INTERACTION REJECTED - MISSING ? UNARY
Fe:Ni:Fe<MONI_DELTA:24:20:12>
SIMPLIFIED MODEL USED FOR PHASE ALCU_THETA:.667:.333
SIMPLIFIED MODEL USED FOR PHASE TI3AL:.75:.25
SIMPLIFIED MODEL USED FOR PHASE TIAL:.5:.5
SIMPLIFIED MODEL USED FOR PHASE AL2FE:.663:.337
SIMPLIFIED MODEL USED FOR PHASE AL5FE2:.714:.286
SIMPLIFIED MODEL USED FOR PHASE AL3NI1:.75:.25
SIMPLIFIED MODEL USED FOR PHASE FE4N:4:1
SIMPLIFIED MODEL USED FOR PHASE FECN_CHI:2.2:1
SIMPLIFIED MODEL USED FOR PHASE M5C2:5:2
SIMPLIFIED MODEL USED FOR PHASE V3C2:3:2
SIMPLIFIED MODEL USED FOR PHASE M3C2:3:2
SIMPLIFIED MODEL USED FOR PHASE MC_ETA:1:1
SIMPLIFIED MODEL USED FOR PHASE MC_SHP:1:1
SIMPLIFIED MODEL USED FOR PHASE LAVES_PHASE:2:1
SIMPLIFIED MODEL USED FOR PHASE MONI3_GAMMA:1:3
SIMPLIFIED MODEL USED FOR PHASE MONI4_BETA:1:4
ERROR: NO DATA FOR BINARY INTERACTION Al,C<LIQUID>
ERROR: NO DATA FOR BINARY INTERACTION Al,Mo<LIQUID>
ERROR: NO DATA FOR BINARY INTERACTION Al,Nb<LIQUID>
ERROR: NO DATA FOR BINARY INTERACTION Nb,Ni<LIQUID>
ERROR: NO DATA FOUND FOR UNARY Al:C<BCC_A2>
MISSING DATA ASSUMED ZERO: PHASE MAGNETIC BUT NO MAGNETIC DATA FOR
                           Mo:C<BCC_A2:1:3>
MISSING DATA ASSUMED ZERO: PHASE MAGNETIC BUT NO MAGNETIC DATA FOR
                           Nb:C<BCC_A2:1:3>
MISSING DATA ASSUMED ZERO: PHASE MAGNETIC BUT NO MAGNETIC DATA FOR
                           Nb:Va<BCC_A2:1:3>
ERROR: NO DATA FOR BINARY INTERACTION Al:C,Va<BCC_A2:1:3>
ERROR: NO DATA FOR BINARY INTERACTION Al,Fe:C<BCC_A2:1:3>
ERROR: NO DATA FOR BINARY INTERACTION Al,Mo:C<BCC_A2:1:3>
ERROR: NO DATA FOR BINARY INTERACTION Al,Nb:C<BCC_A2:1:3>
ERROR: NO DATA FOR BINARY INTERACTION Al,Ni:C<BCC_A2:1:3>
ERROR: NO DATA FOR BINARY INTERACTION Al,Mo:Va<BCC_A2:1:3>
ERROR: NO DATA FOR BINARY INTERACTION Al,Nb:Va<BCC_A2:1:3>
ERROR: NO DATA FOR BINARY INTERACTION Al,Ni:Va<BCC_A2:1:3>
ERROR: NO DATA FOR BINARY INTERACTION Mo,Nb:C<BCC_A2:1:3>
ERROR: NO DATA FOR BINARY INTERACTION Mo,Ni:C<BCC_A2:1:3>
ERROR: NO DATA FOR BINARY INTERACTION Nb,Ni:C<BCC_A2:1:3>
ERROR: NO DATA FOR BINARY INTERACTION Nb,Ni:Va<BCC_A2:1:3>
ERROR: NO DATA FOUND FOR UNARY Al:C<FCC_A1>
MISSING DATA ASSUMED ZERO: PHASE MAGNETIC BUT NO MAGNETIC DATA FOR
                           Mo:C<FCC_A1:1:1>
MISSING DATA ASSUMED ZERO: PHASE MAGNETIC BUT NO MAGNETIC DATA FOR
                           Nb:C<FCC_A1:1:1>
MISSING DATA ASSUMED ZERO: PHASE MAGNETIC BUT NO MAGNETIC DATA FOR
                           Nb:Va<FCC_A1:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Al:C,Va<FCC_A1:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Al,Fe:C<FCC_A1:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Al,Mo:C<FCC_A1:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Al,Nb:C<FCC_A1:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Al,Ni:C<FCC_A1:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Al,Mo:Va<FCC_A1:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Al,Nb:Va<FCC_A1:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Mo,Nb:C<FCC_A1:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Mo,Ni:C<FCC_A1:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Mo,Nb:Va<FCC_A1:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Nb,Ni:C<FCC_A1:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Nb,Ni:Va<FCC_A1:1:1>
ERROR: NO DATA FOUND FOR UNARY Al:C<CBCC_A12>
ERROR: NO DATA FOUND FOR UNARY Ni:C<CBCC_A12>
ERROR: NO DATA FOR BINARY INTERACTION Al:C,Va<CBCC_A12:1:1>
```

```
ERROR: NO DATA FOR BINARY INTERACTION Al,Fe:C<CBCC_A12:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Al,Ni:C<CBCC_A12:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Al,Fe:Va<CBCC_A12:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Al,Ni:Va<CBCC_A12:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Fe,Ni:C<CBCC_A12:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Fe,Ni:Va<CBCC_A12:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Ni:C,Va<CBCC_A12:1:1>
ERROR: NO DATA FOUND FOR UNARY Al:C<CUB_A13>
ERROR: NO DATA FOUND FOR UNARY Ni:C<CUB_A13>
ERROR: NO DATA FOR BINARY INTERACTION Al:C,Va<CUB_A13:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Al,Fe:C<CUB_A13:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Al,Ni:C<CUB_A13:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Al,Fe:Va<CUB_A13:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Al,Ni:Va<CUB_A13:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Fe,Ni:C<CUB_A13:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Fe,Ni:Va<CUB_A13:1:1>
ERROR: NO DATA FOR BINARY INTERACTION Ni:C,Va<CUB_A13:1:1>
ERROR: NO DATA FOUND FOR UNARY Al:C<HCP_A3>
MISSING DATA ASSUMED ZERO: PHASE MAGNETIC BUT NO MAGNETIC DATA FOR
                           Mo:C<HCP_A3:1:.5>
MISSING DATA ASSUMED ZERO: PHASE MAGNETIC BUT NO MAGNETIC DATA FOR
                           Mo:Va<HCP_A3:1:.5>
MISSING DATA ASSUMED ZERO: PHASE MAGNETIC BUT NO MAGNETIC DATA FOR
                           Nb:C<HCP_A3:1:.5>
MISSING DATA ASSUMED ZERO: PHASE MAGNETIC BUT NO MAGNETIC DATA FOR
                           Nb:Va<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Al:C,Va<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Al,Fe:C<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Al,Mo:C<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Al,Nb:C<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Al,Ni:C<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Al,Fe:Va<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Al,Mo:Va<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Al,Nb:Va<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Al,Ni:Va<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Mo,Nb:C<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Mo,Ni:C<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Mo,Nb:Va<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Mo,Ni:Va<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Nb,Ni:C<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Nb,Ni:Va<HCP_A3:1:.5>
ERROR: NO DATA FOR BINARY INTERACTION Mo,Nb:C<CEMENTITE:3:1>
ERROR: NO DATA FOR BINARY INTERACTION Mo,Ni:C<CEMENTITE:3:1>
ERROR: NO DATA FOR BINARY INTERACTION Nb,Ni:C<CEMENTITE:3:1>
ERROR: NO DATA FOUND FOR UNARY Fe:Ni:C<M23C6>
ERROR: NO DATA FOUND FOR UNARY Ni:Fe:C<M23C6>
ERROR: NO DATA FOUND FOR UNARY Ni:Mo:C<M23C6>
ERROR: NO DATA FOR BINARY INTERACTION Fe:Fe,Ni:C<M23C6:20:3:6>
ERROR: NO DATA FOR BINARY INTERACTION Fe,Ni:Fe:C<M23C6:20:3:6>
ERROR: NO DATA FOR BINARY INTERACTION Fe:Mo,Ni:C<M23C6:20:3:6>
ERROR: NO DATA FOR BINARY INTERACTION Fe,Ni:Mo:C<M23C6:20:3:6>
ERROR: NO DATA FOR BINARY INTERACTION Fe,Ni:Ni:C<M23C6:20:3:6>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Fe,Mo:C<M23C6:20:3:6>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Fe,Ni:C<M23C6:20:3:6>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Mo,Ni:C<M23C6:20:3:6>
ERROR: NO DATA FOR BINARY INTERACTION Fe2Mo,Fe2Nb<LAVES_PHASE>
ERROR: NO DATA FOUND FOR UNARY Fe:Mo:Nb<MU_PHASE>
ERROR: NO DATA FOUND FOR UNARY Fe:Nb:Mo<MU_PHASE>
ERROR: NO DATA FOUND FOR UNARY Fe:Nb:Ni<MU_PHASE>
ERROR: NO DATA FOUND FOR UNARY Ni:Mo:Nb<MU_PHASE>
ERROR: NO DATA FOUND FOR UNARY Ni:Nb:Fe<MU_PHASE>
ERROR: NO DATA FOUND FOR UNARY Ni:Nb:Mo<MU_PHASE>
ERROR: NO DATA FOUND FOR UNARY Ni:Nb:Nb<MU_PHASE>
ERROR: NO DATA FOUND FOR UNARY Ni:Nb:Ni<MU_PHASE>
ERROR: NO DATA FOR BINARY INTERACTION Fe:Mo:Fe,Nb<MU_PHASE:7:2:4>
```

```
ERROR: NO DATA FOR BINARY INTERACTION Fe:Mo,Nb:Fe<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe:Mo:Mo,Nb<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe:Mo,Nb:Mo<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe:Mo:Nb,Ni<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe:Mo,Nb:Nb<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe,Ni:Mo:Nb<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe:Mo,Nb:Ni<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe:Nb:Fe,Mo<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe:Nb:Fe,Ni<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe,Ni:Nb:Fe<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe:Nb:Mo,Nb<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe:Nb:Mo,Ni<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe,Ni:Nb:Mo<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe:Nb:Nb,Ni<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe,Ni:Nb:Nb<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Fe,Ni:Nb:Ni<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Mo:Fe,Nb<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Mo,Nb:Fe<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Mo:Mo,Nb<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Mo,Nb:Mo<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Mo:Nb,Ni<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Mo,Nb:Nb<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Mo,Nb:Ni<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Nb:Fe,Mo<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Nb:Fe,Nb<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Nb:Fe,Ni<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Nb:Mo,Nb<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Nb:Mo,Ni<MU_PHASE:7:2:4>
ERROR: NO DATA FOR BINARY INTERACTION Ni:Nb:Nb,Ni<MU_PHASE:7:2:4>

******   10 PHASES IDENTIFIED WITH INCORRECT OR MISSING DATA ******
PHASE: LIQUID
ERROR: Missing data for binary interaction(s)
PHASE: BCC_A2:1:3
ERROR: Missing data for unary(s)
PHASE: FCC_A1:1:1
ERROR: Missing data for unary(s)
PHASE: CBCC_A12:1:1
ERROR: Missing data for unary(s)
PHASE: CUB_A13:1:1
ERROR: Missing data for unary(s)
PHASE: HCP_A3:1:.5
ERROR: Missing data for unary(s)
PHASE: CEMENTITE:3:1
ERROR: Missing data for binary interaction(s)
PHASE: M23C6:20:3:6
ERROR: Missing data for unary(s)
PHASE: LAVES_PHASE
ERROR: Missing data for binary interaction(s)
PHASE: MU_PHASE:7:2:4
ERROR: Missing data for unary(s)
****** GOOD DATAFILE CREATED (but missing/inconsistent data) ******

              **************************************************
              * FOR MISSING INTERACTION DATA SEE FILE misbin.dbl *
              **************************************************
Date and time of run  7-SEP-2010  01:37:53
* DATAFILE = /numerobis/users/hkdb/def.mpi -  CREATED 01:37:53  7-SEP-2010
* SYSTEM = Fe,Ni,Al,Mo,Nb,C,
* NUMBER OF PHASES  =   40
* NUMBER OF SPECIES =  138
*
                        ********************************
                        * UNASSESSED OR INCORRECT DATA *
                        ********************************
```

```
                    ************************************
                    * WARNING/ERRORS HAVE BEEN DETECTED *
                    ************************************

     3 Warnings: UNASSESSED DATA -  Missing data for binary(s)
     7 Warnings: UNASSESSED DATA -  Missing data for unary(s)

MULTIPHASE OPTION ? li sys ph !

NUMBER    PHASE                    STATUS      MODEL
   1      AL5FE4                   NORMAL      REDLICH-KISTER
   2      LIQUID                   ABSENT      REDLICH-KISTER
   3      AL3NI2                   NORMAL      SUBLATTICE
   4      ALCU_THETA               NORMAL      PURE SUBSTANCE
   5      TI3AL                    NORMAL      PURE SUBSTANCE
   6      TIAL                     NORMAL      PURE SUBSTANCE
   7      AL2FE                    NORMAL      PURE SUBSTANCE
   8      AL5FE2                   NORMAL      PURE SUBSTANCE
   9      AL13FE4                  NORMAL      SUBLATTICE
  10      BCC_A2                   ABSENT      SUBLATTICE
  11      FCC_A1                   ABSENT      SUBLATTICE
  12      ALNI_B2                  NORMAL      SUBLATTICE
  13      AL3NI1                   NORMAL      PURE SUBSTANCE
  14      CBCC_A12                 ABSENT      SUBLATTICE
  15      CUB_A13                  ABSENT      SUBLATTICE
  16      HCP_A3                   ABSENT      SUBLATTICE
  17      DIAMOND_A4               NORMAL      PURE SUBSTANCE
  18      GRAPHITE                 NORMAL      PURE SUBSTANCE
  19      GAS                      NORMAL      IDEAL GAS
  20      CEMENTITE                ABSENT      SUBLATTICE
  21      FE4N                     NORMAL      PURE SUBSTANCE
>>>>> Type return for more, Q to quit paging :
  22      FECN_CHI                 NORMAL      PURE SUBSTANCE
  23      KSI_CARBIDE              NORMAL      SUBLATTICE
  24      M5C2                     NORMAL      PURE SUBSTANCE
  25      M7C3                     NORMAL      SUBLATTICE
  26      V3C2                     NORMAL      PURE SUBSTANCE
  27      M23C6                    ABSENT      SUBLATTICE
  28      M6C                      NORMAL      SUBLATTICE
  29      M3C2                     NORMAL      PURE SUBSTANCE
  30      MC_ETA                   NORMAL      REDLICH-KISTER
  31      MC_SHP                   NORMAL      PURE SUBSTANCE
  32      LAVES_PHASE              ABSENT      REDLICH-KISTER
  33      CHI_A12                  NORMAL      SUBLATTICE
  34      MONI_DELTA               NORMAL      SUBLATTICE
  35      MU_PHASE                 ABSENT      SUBLATTICE
  36      P_PHASE                  NORMAL      SUBLATTICE
  37      R_PHASE                  NORMAL      SUBLATTICE
  38      SIGMA                    NORMAL      SUBLATTICE
  39      MONI3_GAMMA              NORMAL      PURE SUBSTANCE
  40      MONI4_BETA               NORMAL      PURE SUBSTANCE

MULTIPHASE OPTION ?
MULTIPHASE OPTION ? classify normal p(*) !
MULTIPHASE OPTION ? lis sys co !

NUMBER    COMPONENT                STATUS      AMOUNT     DELTA    REF.P
   1      Fe                       NORMAL     undefined
   2      Ni                       NORMAL     undefined
   3      Al                       NORMAL     undefined
   4      Mo                       NORMAL     undefined
   5      Nb                       NORMAL     undefined
   6      C                        NORMAL     undefined

MULTIPHASE OPTION ? set w=100 !
```

```
 MULTIPHASE OPTION ? set w(1)=84.17 w(2)=12.94 w(3)=1.61 w(4)=1 w(5)=0.24 w(6)=0.04 !
 MULTIPHASE OPTION ? li ss
 SS  KEYWORD NOT RECOGNISED
 LIST WHAT ? lis^?
 LIS  KEYWORD NOT RECOGNISED
 LIST WHAT ? co !
 CO  KEYWORD NOT RECOGNISED
 LIST WHAT ? sys co !

 NUMBER    COMPONENT               STATUS      AMOUNT     DELTA    REF.P
    1      Fe                      NORMAL      1507.15
    2      Ni                      NORMAL      220.480
    3      Al                      NORMAL      59.6704
    4      Mo                      NORMAL      10.4232
    5      Nb                      NORMAL      2.58325
    6      C                       NORMAL      3.33028

 MULTIPHASE OPTION ? step temp 673 1573 10 !
 MULTIPHASE OPTION ? comp pr br pr mole !
 NUMBER OF STEPS =  91

     673.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   673.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -2.332706E+04 1.547124E-02 1.507153E+03 8.417000E+01
Ni                          -3.729450E+04 1.274895E-03 2.204805E+02 1.294000E+01
Al                          -1.325946E+05 5.116551E-11 5.967043E+01 1.610000E+00
Mo                          -3.235662E+04 3.081176E-03 1.042318E+01 1.000000E+00
Nb                          -9.287490E+04 6.190579E-08 2.583245E+00 2.400000E-01
C                           -6.646727E+04 6.939015E-06 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 1.3894E+03 BCC_A2              0.9620224       0.0282327       0.0081665
 3.3527E+02 FCC_A1              0.4973395       0.4477530       0.0536834
 6.1461E+01 ALNI_B2             0.0000000       0.5065927       0.4934073
 4.3564E+00 HCP_A3              0.0000008       0.0000005       0.0000000
 1.3147E+01 M6C                 0.2867634       0.0000000       0.0000000

                                 Mo              Nb              C
 1.3894E+03 BCC_A2              0.0015755       0.0000028       0.0000000
 3.3527E+02 FCC_A1              0.0012239       0.0000002       0.0000000
 6.1461E+01 ALNI_B2             0.0000000       0.0000000       0.0000000
 4.3564E+00 HCP_A3              0.0745933       0.5920721       0.3333333
 1.3147E+01 M6C                 0.5703795       0.0000000       0.1428571

Gibbs Energy = -5.2090400640E+07 J   System Enthalpy =  1.2626127730E+07 J
     683.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   683.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -2.384959E+04 1.499930E-02 1.507153E+03 8.417000E+01
Ni                          -3.806522E+04 1.227191E-03 2.204805E+02 1.294000E+01
Al                          -1.326910E+05 7.116689E-11 5.967043E+01 1.610000E+00
```

```
Mo                          -3.342392E+04 2.778828E-03 1.042318E+01 1.000000E+00
Nb                          -9.475200E+04 5.671735E-08 2.583245E+00 2.400000E-01
C                           -6.419217E+04 1.232593E-05 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe             Ni             Al
 1.3765E+03 BCC_A2              0.9610655      0.0285071      0.0088402
 3.5159E+02 FCC_A1              0.5133588      0.4317490      0.0535136
 5.8128E+01 ALNI_B2             0.0000000      0.5064937      0.4935063
 4.4488E+00 HCP_A3              0.0000012      0.0000007      0.0000000
 1.2931E+01 M6C                 0.2871324      0.0000000      0.0000000

                                 Mo             Nb             C
 1.3765E+03 BCC_A2              0.0015845      0.0000026      0.0000000
 3.5159E+02 FCC_A1              0.0013783      0.0000002      0.0000000
 5.8128E+01 ALNI_B2             0.0000000      0.0000000      0.0000000
 4.4488E+00 HCP_A3              0.0868411      0.5798236      0.3333333
 1.2931E+01 M6C                 0.5700105      0.0000000      0.1428571

Gibbs Energy = -5.3058101852E+07 J   System Enthalpy =  1.3449621544E+07 J
     693.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   693.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -2.436756E+04 1.456630E-02 1.507153E+03 8.417000E+01
Ni                          -3.885441E+04 1.178789E-03 2.204805E+02 1.294000E+01
Al                          -1.327708E+05 9.833231E-11 5.967043E+01 1.610000E+00
Mo                          -3.447474E+04 2.520831E-03 1.042318E+01 1.000000E+00
Nb                          -9.660197E+04 5.234113E-08 2.583245E+00 2.400000E-01
C                           -6.201291E+04 2.117951E-05 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe             Ni             Al
 1.3621E+03 BCC_A2              0.9601503      0.0286641      0.0095846
 3.6976E+02 FCC_A1              0.5292553      0.4159800      0.0532366
 5.4555E+01 ALNI_B2             0.0000000      0.5063614      0.4936386
 4.5544E+00 HCP_A3              0.0000020      0.0000010      0.0000000
 1.2685E+01 M6C                 0.2876017      0.0000000      0.0000000

                                 Mo             Nb             C
 1.3621E+03 BCC_A2              0.0015984      0.0000025      0.0000000
 3.6976E+02 FCC_A1              0.0015277      0.0000003      0.0000000
 5.4555E+01 ALNI_B2             0.0000000      0.0000000      0.0000000
 4.5544E+00 HCP_A3              0.1002432      0.5664206      0.3333333
 1.2685E+01 M6C                 0.5695411      0.0000000      0.1428571

Gibbs Energy = -5.4037888150E+07 J   System Enthalpy =  1.4278825675E+07 J
     703.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   703.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -2.490468E+04 1.411131E-02 1.507153E+03 8.417000E+01
Ni                          -3.967252E+04 1.127997E-03 2.204805E+02 1.294000E+01
```

```
Al                          -1.328411E+05 1.348428E-10 5.967043E+01 1.610000E+00
Mo                          -3.550815E+04 2.299975E-03 1.042318E+01 1.000000E+00
Nb                          -9.843637E+04 4.854212E-08 2.583245E+00 2.400000E-01
C                           -5.991546E+04 3.533825E-05 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 1.3455E+03 BCC_A2              0.9592674       0.0287090       0.0104046
 3.9034E+02 FCC_A1              0.5452948       0.4001468       0.0528826
 5.0685E+01 ALNI_B2             0.0000000       0.5062004       0.4937996
 4.6748E+00 HCP_A3              0.0000031       0.0000014       0.0000000
 1.2404E+01 M6C                 0.2881888       0.0000000       0.0000000

                                 Mo              Nb              C
 1.3455E+03 BCC_A2              0.0016166       0.0000024       0.0000000
 3.9034E+02 FCC_A1              0.0016754       0.0000003       0.0000000
 5.0685E+01 ALNI_B2             0.0000000       0.0000000       0.0000000
 4.6748E+00 HCP_A3              0.1147854       0.5518768       0.3333333
 1.2404E+01 M6C                 0.5689540       0.0000000       0.1428571

Gibbs Energy = -5.5029735919E+07 J   System Enthalpy =  1.5122438697E+07 J
     713.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   713.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -2.543877E+04 1.368968E-02 1.507153E+03 8.417000E+01
Ni                          -4.050804E+04 1.077559E-03 2.204805E+02 1.294000E+01
Al                          -1.328949E+05 1.837873E-10 5.967043E+01 1.610000E+00
Mo                          -3.652173E+04 2.110922E-03 1.042318E+01 1.000000E+00
Nb                          -1.002444E+05 4.531527E-08 2.583245E+00 2.400000E-01
C                           -5.792135E+04 5.711729E-05 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 1.3265E+03 BCC_A2              0.9584078       0.0286444       0.0113061
 4.1379E+02 FCC_A1              0.5615212       0.3841779       0.0524790
 4.6475E+01 ALNI_B2             0.0000000       0.5060142       0.4939858
 4.8112E+00 HCP_A3              0.0000048       0.0000019       0.0000000
 1.2086E+01 M6C                 0.2889100       0.0000000       0.0000000

                                 Mo              Nb              C
 1.3265E+03 BCC_A2              0.0016393       0.0000023       0.0000000
 4.1379E+02 FCC_A1              0.0018215       0.0000003       0.0000000
 4.6475E+01 ALNI_B2             0.0000000       0.0000000       0.0000000
 4.8112E+00 HCP_A3              0.1303994       0.5362605       0.3333333
 1.2086E+01 M6C                 0.5682329       0.0000000       0.1428571

Gibbs Energy = -5.6033718995E+07 J   System Enthalpy =  1.5985819406E+07 J
     723.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   723.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -2.597978E+04 1.327651E-02 1.507153E+03 8.417000E+01
```

```
Ni                             -4.136555E+04 1.026916E-03 2.204805E+02 1.294000E+01
Al                             -1.329353E+05 2.489190E-10 5.967043E+01 1.610000E+00
Mo                             -3.751544E+04 1.948441E-03 1.042318E+01 1.000000E+00
Nb                             -1.020268E+05 4.256415E-08 2.583245E+00 2.400000E-01
C                              -5.603186E+04 8.952900E-05 3.330281E+00 4.000000E-02
Total                                                     1.803641E+03 1.000000E+02

Amount      Phase                Mole fraction of component within phase
compnt moles
                                  Fe             Ni             Al
 1.3046E+03 BCC_A2              0.9575621      0.0284727      0.0122960
 4.4048E+02 FCC_A1              0.5778596      0.3681203      0.0520554
 4.1886E+01 ALNI_B2             0.0000000      0.5058059      0.4941941
 4.9648E+00 HCP_A3              0.0000074      0.0000025      0.0000000
 1.1727E+01 M6C                 0.2897794      0.0000000      0.0000000

                                  Mo             Nb             C
 1.3046E+03 BCC_A2              0.0016669      0.0000022      0.0000000
 4.4048E+02 FCC_A1              0.0019644      0.0000003      0.0000000
 4.1886E+01 ALNI_B2             0.0000000      0.0000000      0.0000000
 4.9648E+00 HCP_A3              0.1469615      0.5196953      0.3333333
 1.1727E+01 M6C                 0.5673635      0.0000000      0.1428571

Gibbs Energy = -5.7049972305E+07 J   System Enthalpy =  1.6872784217E+07 J
     733.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   733.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                           -2.652744E+04 1.287254E-02 1.507153E+03 8.417000E+01
Ni                           -4.224558E+04 9.763256E-04 2.204805E+02 1.294000E+01
Al                           -1.329619E+05 3.351062E-10 5.967043E+01 1.610000E+00
Mo                           -3.848742E+04 1.808840E-03 1.042318E+01 1.000000E+00
Nb                           -1.037794E+05 4.024525E-08 2.583245E+00 2.400000E-01
C                            -5.425396E+04 1.361074E-04 3.330281E+00 4.000000E-02
Total                                                   1.803641E+03 1.000000E+02

Amount      Phase                Mole fraction of component within phase
compnt moles
                                  Fe             Ni             Al
 1.2795E+03 BCC_A2              0.9567197      0.0281968      0.0133815
 4.7079E+02 FCC_A1              0.5941764      0.3520786      0.0516427
 3.6883E+01 ALNI_B2             0.0000000      0.5055786      0.4944214
 5.1364E+00 HCP_A3              0.0000111      0.0000033      0.0000000
 1.1327E+01 M6C                 0.2908074      0.0000000      0.0000000

                                  Mo             Nb             C
 1.2795E+03 BCC_A2              0.0016999      0.0000022      0.0000000
 4.7079E+02 FCC_A1              0.0021019      0.0000004      0.0000001
 3.6883E+01 ALNI_B2             0.0000000      0.0000000      0.0000000
 5.1364E+00 HCP_A3              0.1642972      0.5023551      0.3333333
 1.1327E+01 M6C                 0.5663355      0.0000000      0.1428571

Gibbs Energy = -5.8078673995E+07 J   System Enthalpy =  1.7786396781E+07 J
     743.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   743.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
```

```
Fe                          -2.709518E+04 1.245069E-02 1.507153E+03 8.417000E+01
Ni                          -4.315214E+04 9.255077E-04 2.204805E+02 1.294000E+01
Al                          -1.329811E+05 4.480790E-10 5.967043E+01 1.610000E+00
Mo                          -3.945011E+04 1.685136E-03 1.042318E+01 1.000000E+00
Nb                          -1.055054E+05 3.827469E-08 2.583245E+00 2.400000E-01
C                           -5.258699E+04 2.009578E-04 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.2509E+03 BCC_A2              0.9558687       0.0278203       0.0145700
 5.0508E+02 FCC_A1              0.6103239       0.3361734       0.0512705
 3.1433E+01 ALNI_B2             0.0000000       0.5053354       0.4946646
 5.3264E+00 HCP_A3              0.0000164       0.0000043       0.0000000
 1.0883E+01 M6C                 0.2919999       0.0000000       0.0000000

                                Mo              Nb              C
 1.2509E+03 BCC_A2              0.0017389       0.0000021       0.0000000
 5.0508E+02 FCC_A1              0.0022317       0.0000004       0.0000002
 3.1433E+01 ALNI_B2             0.0000000       0.0000000       0.0000000
 5.3264E+00 HCP_A3              0.1821933       0.4844527       0.3333333
 1.0883E+01 M6C                 0.5651430       0.0000000       0.1428571

Gibbs Energy = -5.9120036685E+07 J   System Enthalpy =  1.8729414437E+07 J
     753.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   753.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -2.759968E+04 1.217570E-02 1.507153E+03 8.417000E+01
Ni                          -4.406323E+04 8.779456E-04 2.204805E+02 1.294000E+01
Al                          -1.329581E+05 5.985470E-10 5.967043E+01 1.610000E+00
Mo                          -4.034721E+04 1.589413E-03 1.042318E+01 1.000000E+00
Nb                          -1.071569E+05 3.688517E-08 2.583245E+00 2.400000E-01
C                           -5.109225E+04 2.856838E-04 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.2185E+03 BCC_A2              0.9549962       0.0273482       0.0158694
 5.4374E+02 FCC_A1              0.6261701       0.3205131       0.0509639
 2.5505E+01 ALNI_B2             0.0000000       0.5050794       0.4949206
 5.5349E+00 HCP_A3              0.0000238       0.0000054       0.0000000
 1.0396E+01 M6C                 0.2933578       0.0000000       0.0000000

                                Mo              Nb              C
 1.2185E+03 BCC_A2              0.0017842       0.0000021       0.0000000
 5.4374E+02 FCC_A1              0.0023521       0.0000004       0.0000003
 2.5505E+01 ALNI_B2             0.0000000       0.0000000       0.0000000
 5.5349E+00 HCP_A3              0.2004153       0.4662222       0.3333333
 1.0396E+01 M6C                 0.5637850       0.0000000       0.1428571

Gibbs Energy = -6.0174303944E+07 J   System Enthalpy =  1.9704563058E+07 J
     763.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   763.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm
```

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-2.820273E+04	1.173011E-02	1.507153E+03	8.417000E+01
Ni		-4.502033E+04	8.279536E-04	2.204805E+02	1.294000E+01
Al		-1.329518E+05	7.914205E-10	5.967043E+01	1.610000E+00
Mo		-4.125151E+04	1.499724E-03	1.042318E+01	1.000000E+00
Nb		-1.088055E+05	3.559667E-08	2.583245E+00	2.400000E-01
C		-4.967643E+04	3.974292E-04	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	Ni	Al
1.1818E+03	BCC_A2	0.9540879	0.0267862	0.0172876
5.8718E+02	FCC_A1	0.6416138	0.3051804	0.0507423
1.9075E+01	ALNI_B2	0.0000000	0.5048138	0.4951862
5.7614E+00	HCP_A3	0.0000340	0.0000067	0.0000000
9.8659E+00	M6C	0.2948774	0.0000000	0.0000000

		Mo	Nb	C
1.1818E+03	BCC_A2	0.0018361	0.0000021	0.0000000
5.8718E+02	FCC_A1	0.0024624	0.0000005	0.0000006
1.9075E+01	ALNI_B2	0.0000000	0.0000000	0.0000000
5.7614E+00	HCP_A3	0.2187275	0.4478985	0.3333333
9.8659E+00	M6C	0.5622655	0.0000000	0.1428571

Gibbs Energy = -6.1241749739E+07 J System Enthalpy = 2.0714683007E+07 J
     773.000
*** MULTIPHASE - Stage 1* Results ***

Temperature = 773.0000 K

Fixed pressure = 1.013250E+05 Pa, 1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-2.877346E+04	1.136877E-02	1.507153E+03	8.417000E+01
Ni		-4.599150E+04	7.802840E-04	2.204805E+02	1.294000E+01
Al		-1.329178E+05	1.043394E-09	5.967043E+01	1.610000E+00
Mo		-4.212037E+04	1.425061E-03	1.042318E+01	1.000000E+00
Nb		-1.103935E+05	3.471087E-08	2.583245E+00	2.400000E-01
C		-4.841235E+04	5.353902E-04	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	Ni	Al
1.1403E+03	BCC_A2	0.9531290	0.0261413	0.0188326
6.3588E+02	FCC_A1	0.6565854	0.2902313	0.0506195
1.2124E+01	ALNI_B2	0.0000000	0.5045417	0.4954583
6.0054E+00	HCP_A3	0.0000478	0.0000082	0.0000000
9.2943E+00	M6C	0.2965506	0.0000000	0.0000000

		Mo	Nb	C
1.1403E+03	BCC_A2	0.0018950	0.0000021	0.0000000
6.3588E+02	FCC_A1	0.0025622	0.0000005	0.0000011
1.2124E+01	ALNI_B2	0.0000000	0.0000000	0.0000000
6.0054E+00	HCP_A3	0.2369037	0.4297070	0.3333333
9.2943E+00	M6C	0.5605922	0.0000000	0.1428571

Gibbs Energy = -6.2322678955E+07 J System Enthalpy = 2.1762742496E+07 J
     783.000
*** MULTIPHASE - Stage 1* Results ***

Temperature = 783.0000 K

Fixed pressure = 1.013250E+05 Pa, 1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-2.935056E+04	1.101658E-02	1.507153E+03	8.417000E+01
Ni		-4.698600E+04	7.338385E-04	2.204805E+02	1.294000E+01
Al		-1.328679E+05	1.369266E-09	5.967043E+01	1.610000E+00
Mo		-4.296258E+04	1.361444E-03	1.042318E+01	1.000000E+00
Nb		-1.119345E+05	3.411414E-08	2.583245E+00	2.400000E-01
C		-4.727830E+04	7.016187E-04	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	Ni	Al
1.0937E+03	BCC_A2	0.9521033	0.0254212	0.0205125
6.9038E+02	FCC_A1	0.6710406	0.2757004	0.0506047
4.6395E+00	ALNI_B2	0.0000000	0.5042661	0.4957339
6.2659E+00	HCP_A3	0.0000660	0.0000098	0.0000000
8.6827E+00	M6C	0.2983663	0.0000000	0.0000000

		Mo	Nb	C
1.0937E+03	BCC_A2	0.0019608	0.0000021	0.0000001
6.9038E+02	FCC_A1	0.0026519	0.0000005	0.0000018
4.6395E+00	ALNI_B2	0.0000000	0.0000000	0.0000000
6.2659E+00	HCP_A3	0.2547381	0.4118527	0.3333333
8.6827E+00	M6C	0.5587766	0.0000000	0.1428571

Gibbs Energy = -6.3417427440E+07 J System Enthalpy = 2.2851755054E+07 J
     793.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   793.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-2.992760E+04	1.068387E-02	1.507153E+03	8.417000E+01
Ni		-4.796323E+04	6.930392E-04	2.204805E+02	1.294000E+01
Al		-1.330896E+05	1.712591E-09	5.967043E+01	1.610000E+00
Mo		-4.380972E+04	1.301192E-03	1.042318E+01	1.000000E+00
Nb		-1.134953E+05	3.344215E-08	2.583245E+00	2.400000E-01
C		-4.616688E+04	9.100814E-04	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	Ni	Al
1.0464E+03	BCC_A2	0.9513131	0.0250081	0.0216365
7.4274E+02	FCC_A1	0.6857665	0.2616178	0.0498577
6.5566E+00	HCP_A3	0.0000907	0.0000117	0.0000000
7.9975E+00	M6C	0.3003689	0.0000000	0.0000000

		Mo	Nb	C
1.0464E+03	BCC_A2	0.0020401	0.0000021	0.0000001
7.4274E+02	FCC_A1	0.0027546	0.0000006	0.0000029
6.5566E+00	HCP_A3	0.2729723	0.3935919	0.3333333
7.9975E+00	M6C	0.5567740	0.0000000	0.1428571

Gibbs Energy = -6.4526154476E+07 J System Enthalpy = 2.3905099848E+07 J
     803.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   803.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

```
Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                           -3.059418E+04 1.023100E-02 1.507153E+03 8.417000E+01
Ni                           -4.893239E+04 6.562347E-04 2.204805E+02 1.294000E+01
Al                           -1.337503E+05 1.994574E-09 5.967043E+01 1.610000E+00
Mo                           -4.469680E+04 1.237584E-03 1.042318E+01 1.000000E+00
Nb                           -1.151422E+05 3.237894E-08 2.583245E+00 2.400000E-01
C                            -4.498749E+04 1.184858E-03 3.330281E+00 4.000000E-02
Total                                                   1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe             Ni             Al
 1.0018E+03 BCC_A2              0.9509762      0.0250697      0.0218135
 7.8772E+02 FCC_A1              0.7010894      0.2480142      0.0480085
 6.8879E+00 HCP_A3              0.0001246      0.0000140      0.0000000
 7.2129E+00 M6C                 0.3025882      0.0000000      0.0000000

                                 Mo             Nb             C
 1.0018E+03 BCC_A2              0.0021383      0.0000021      0.0000001
 7.8772E+02 FCC_A1              0.0028826      0.0000006      0.0000048
 6.8879E+00 HCP_A3              0.2918694      0.3746586      0.3333333
 7.2129E+00 M6C                 0.5545546      0.0000000      0.1428571

Gibbs Energy = -6.5647351845E+07 J   System Enthalpy =  2.4871579929E+07 J
     813.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   813.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                           -3.108265E+04 1.006963E-02 1.507153E+03 8.417000E+01
Ni                           -4.986384E+04 6.257001E-04 2.204805E+02 1.294000E+01
Al                           -1.343717E+05 2.327753E-09 5.967043E+01 1.610000E+00
Mo                           -4.551466E+04 1.190668E-03 1.042318E+01 1.000000E+00
Nb                           -1.166645E+05 3.195811E-08 2.583245E+00 2.400000E-01
C                            -4.403323E+04 1.482415E-03 3.330281E+00 4.000000E-02
Total                                                   1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe             Ni             Al
 9.5310E+02 BCC_A2              0.9506772      0.0250781      0.0219941
 8.3692E+02 FCC_A1              0.7158541      0.2348819      0.0462501
 7.2383E+00 HCP_A3              0.0001683      0.0000165      0.0000000
 6.3767E+00 M6C                 0.3049341      0.0000000      0.0000000

                                 Mo             Nb             C
 9.5310E+02 BCC_A2              0.0022482      0.0000022      0.0000002
 8.3692E+02 FCC_A1              0.0030057      0.0000007      0.0000076
 7.2383E+00 HCP_A3              0.3099614      0.3565205      0.3333333
 6.3767E+00 M6C                 0.5522088      0.0000000      0.1428571

Gibbs Energy = -6.6780701637E+07 J   System Enthalpy =  2.5857034004E+07 J
     823.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   823.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                           -3.166460E+04 9.780110E-03 1.507153E+03 8.417000E+01
Ni                           -5.084378E+04 5.930608E-04 2.204805E+02 1.294000E+01
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Al                            -1.350298E+05 2.691953E-09 5.967043E+01 1.610000E+00
Mo                            -4.633126E+04 1.146819E-03 1.042318E+01 1.000000E+00
Nb                            -1.181743E+05 3.161083E-08 2.583245E+00 2.400000E-01
C                             -4.315297E+04 1.824783E-03 3.330281E+00 4.000000E-02
Total                                                    1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 8.9969E+02 BCC_A2              0.9504138       0.0250331       0.0221803
 8.9085E+02 FCC_A1              0.7300694       0.2222125       0.0445809
 7.6049E+00 HCP_A3              0.0002235       0.0000192       0.0000000
 5.4924E+00 M6C                 0.3073902       0.0000000       0.0000000

                                 Mo              Nb              C
 8.9969E+02 BCC_A2              0.0023702       0.0000023       0.0000003
 8.9085E+02 FCC_A1              0.0031248       0.0000007       0.0000117
 7.6049E+00 HCP_A3              0.3270939       0.3393300       0.3333333
 5.4924E+00 M6C                 0.5497526       0.0000000       0.1428571

Gibbs Energy = -6.7926296155E+07 J   System Enthalpy =  2.6862835700E+07 J
     833.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   833.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                           -3.225466E+04 9.494445E-03 1.507153E+03 8.417000E+01
Ni                           -5.184591E+04 5.610462E-04 2.204805E+02 1.294000E+01
Al                           -1.356996E+05 3.097060E-09 5.967043E+01 1.610000E+00
Mo                           -4.712819E+04 1.108724E-03 1.042318E+01 1.000000E+00
Nb                           -1.196348E+05 3.149874E-08 2.583245E+00 2.400000E-01
C                            -4.238722E+04 2.198399E-03 3.330281E+00 4.000000E-02
Total                                                    1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 8.4103E+02 BCC_A2              0.9501829       0.0249343       0.0223750
 9.5006E+02 FCC_A1              0.7437440       0.2099970       0.0429997
 7.9837E+00 HCP_A3              0.0002921       0.0000219       0.0000000
 4.5646E+00 M6C                 0.3099400       0.0000000       0.0000000

                                 Mo              Nb              C
 8.4103E+02 BCC_A2              0.0025050       0.0000023       0.0000005
 9.5006E+02 FCC_A1              0.0032410       0.0000008       0.0000174
 7.9837E+00 HCP_A3              0.3431316       0.3232211       0.3333333
 4.5646E+00 M6C                 0.5472029       0.0000000       0.1428571

Gibbs Energy = -6.9084242150E+07 J   System Enthalpy =  2.7890346238E+07 J
     843.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   843.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                           -3.284850E+04 9.218631E-03 1.507153E+03 8.417000E+01
Ni                           -5.286971E+04 5.298186E-04 2.204805E+02 1.294000E+01
Al                           -1.363786E+05 3.546633E-09 5.967043E+01 1.610000E+00
Mo                           -4.790398E+04 1.075995E-03 1.042318E+01 1.000000E+00
Nb                           -1.210408E+05 3.163474E-08 2.583245E+00 2.400000E-01
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C                          -4.173494E+04 2.594487E-03 3.330281E+00 4.000000E-02
Total                                                 1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe             Ni             Al
 7.7649E+02 BCC_A2             0.9499803      0.0247812      0.0225820
 1.0152E+03 FCC_A1             0.7568848      0.1982278      0.0415056
 8.3696E+00 HCP_A3             0.0003756      0.0000247      0.0000000
 3.5997E+00 M6C                0.3125667      0.0000000      0.0000000

                                Mo             Nb             C
 7.7649E+02 BCC_A2             0.0026534      0.0000025      0.0000007
 1.0152E+03 FCC_A1             0.0033557      0.0000009      0.0000253
 8.3696E+00 HCP_A3             0.3579551      0.3083112      0.3333333
 3.5997E+00 M6C                0.5445762      0.0000000      0.1428571

Gibbs Energy = -7.0254659697E+07 J   System Enthalpy =  2.8940853850E+07 J
     853.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   853.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -3.344676E+04 8.951439E-03 1.507153E+03 8.417000E+01
Ni                          -5.391568E+04 4.994383E-04 2.204805E+02 1.294000E+01
Al                          -1.370648E+05 4.044425E-09 5.967043E+01 1.610000E+00
Mo                          -4.865902E+04 1.048028E-03 1.042318E+01 1.000000E+00
Nb                          -1.223883E+05 3.203110E-08 2.583245E+00 2.400000E-01
C                           -4.119398E+04 3.002569E-03 3.330281E+00 4.000000E-02
Total                                                 1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe             Ni             Al
 7.0536E+02 BCC_A2             0.9498005      0.0245737      0.0228059
 1.0869E+03 FCC_A1             0.7694928      0.1869016      0.0400987
 8.7556E+00 HCP_A3             0.0004753      0.0000275      0.0000000
 2.6064E+00 M6C                0.3152534      0.0000000      0.0000000

                                Mo             Nb             C
 7.0536E+02 BCC_A2             0.0028164      0.0000026      0.0000009
 1.0869E+03 FCC_A1             0.0034703      0.0000010      0.0000356
 8.7556E+00 HCP_A3             0.3714561      0.2947078      0.3333333
 2.6064E+00 M6C                0.5418895      0.0000000      0.1428571

Gibbs Energy = -7.1437680155E+07 J   System Enthalpy =  3.0015403782E+07 J
     863.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   863.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -3.405084E+04 8.690863E-03 1.507153E+03 8.417000E+01
Ni                          -5.498530E+04 4.698931E-04 2.204805E+02 1.294000E+01
Al                          -1.377564E+05 4.594655E-09 5.967043E+01 1.610000E+00
Mo                          -4.939408E+04 1.024258E-03 1.042318E+01 1.000000E+00
Nb                          -1.236727E+05 3.270963E-08 2.583245E+00 2.400000E-01
C                           -4.076186E+04 3.410959E-03 3.330281E+00 4.000000E-02
Total                                                 1.803641E+03 1.000000E+02
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Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 6.2687E+02 BCC_A2             0.9496367       0.0243111       0.0230530
 1.1660E+03 FCC_A1             0.7815681       0.1760152       0.0387802
 9.1333E+00 HCP_A3             0.0005919       0.0000302       0.0000000
 1.5960E+00 M6C                0.3179832       0.0000000       0.0000000

                                Mo              Nb              C
 6.2687E+02 BCC_A2             0.0029952       0.0000028       0.0000013
 1.1660E+03 FCC_A1             0.0035866       0.0000011       0.0000489
 9.1333E+00 HCP_A3             0.3835367       0.2825079       0.3333333
 1.5960E+00 M6C                0.5391597       0.0000000       0.1428571

Gibbs Energy = -7.2633443041E+07 J   System Enthalpy =  3.1114844833E+07 J
     873.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   873.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -3.465926E+04 8.438547E-03 1.507153E+03 8.417000E+01
Ni                          -5.607951E+04 4.412161E-04 2.204805E+02 1.294000E+01
Al                          -1.384505E+05 5.202736E-09 5.967043E+01 1.610000E+00
Mo                          -5.010916E+04 1.004314E-03 1.042318E+01 1.000000E+00
Nb                          -1.248874E+05 3.370834E-08 2.583245E+00 2.400000E-01
C                           -4.043894E+04 3.805908E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 5.4020E+02 BCC_A2             0.9494799       0.0239933       0.0233307
 1.2534E+03 FCC_A1             0.7931043       0.1655698       0.0375527
 9.4927E+00 HCP_A3             0.0007253       0.0000328       0.0000000
 5.8201E-01 M6C                0.3207387       0.0000000       0.0000000

                                Mo              Nb              C
 5.4020E+02 BCC_A2             0.0031914       0.0000030       0.0000017
 1.2534E+03 FCC_A1             0.0037067       0.0000012       0.0000654
 9.4927E+00 HCP_A3             0.3941085       0.2718001       0.3333333
 5.8201E-01 M6C                0.5364042       0.0000000       0.1428571

Gibbs Energy = -7.3842091511E+07 J   System Enthalpy =  3.2239514376E+07 J
     883.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   883.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -3.527106E+04 8.195247E-03 1.507153E+03 8.417000E+01
Ni                          -5.719707E+04 4.135637E-04 2.204805E+02 1.294000E+01
Al                          -1.391461E+05 5.873537E-09 5.967043E+01 1.610000E+00
Mo                          -5.091493E+04 9.731025E-04 1.042318E+01 1.000000E+00
Nb                          -1.259097E+05 3.563596E-08 2.583245E+00 2.400000E-01
C                           -4.018326E+04 4.197435E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
```

```
 4.4424E+02 BCC_A2              0.9493670       0.0236245       0.0236482
 1.3498E+03 FCC_A1              0.8041421       0.1555718       0.0364249
 9.6408E+00 HCP_A3              0.0008624       0.0000353       0.0000000

                                 Mo              Nb              C
 4.4424E+02 BCC_A2              0.0033548       0.0000033       0.0000023
 1.3498E+03 FCC_A1              0.0037742       0.0000014       0.0000857
 9.6408E+00 HCP_A3              0.3981647       0.2676043       0.3333333

Gibbs Energy = -7.5063754761E+07 J   System Enthalpy =  3.3384497104E+07 J
     893.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   893.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -3.589028E+04 7.956226E-03 1.507153E+03 8.417000E+01
Ni                          -5.833843E+04 3.869643E-04 2.204805E+02 1.294000E+01
Al                          -1.398396E+05 6.614662E-09 5.967043E+01 1.610000E+00
Mo                          -5.183365E+04 9.292837E-04 1.042318E+01 1.000000E+00
Nb                          -1.266831E+05 3.890939E-08 2.583245E+00 2.400000E-01
C                           -4.000408E+04 4.571753E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 3.3782E+02 BCC_A2              0.9493004       0.0232046       0.0240182
 1.4563E+03 FCC_A1              0.8146949       0.1460134       0.0354021
 9.5075E+00 HCP_A3              0.0009895       0.0000376       0.0000000

                                 Mo              Nb              C
 3.3782E+02 BCC_A2              0.0034700       0.0000038       0.0000030
 1.4563E+03 FCC_A1              0.0037780       0.0000016       0.0001099
 9.5075E+00 HCP_A3              0.3943149       0.2713248       0.3333333

Gibbs Energy = -7.6298476688E+07 J   System Enthalpy =  3.4548402978E+07 J
     903.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   903.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -3.651025E+04 7.728471E-03 1.507153E+03 8.417000E+01
Ni                          -5.950605E+04 3.613427E-04 2.204805E+02 1.294000E+01
Al                          -1.405190E+05 7.443719E-09 5.967043E+01 1.610000E+00
Mo                          -5.269780E+04 8.948240E-04 1.042318E+01 1.000000E+00
Nb                          -1.273508E+05 4.300229E-08 2.583245E+00 2.400000E-01
C                           -3.998570E+04 4.864730E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 2.2035E+02 BCC_A2              0.9491931       0.0227285       0.0244580
 1.5739E+03 FCC_A1              0.8246700       0.1368989       0.0344872
 9.3423E+00 HCP_A3              0.0011151       0.0000394       0.0000000

                                 Mo              Nb              C
 2.2035E+02 BCC_A2              0.0036123       0.0000043       0.0000038
 1.5739E+03 FCC_A1              0.0038051       0.0000019       0.0001368
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 9.3423E+00 HCP_A3             0.3894247       0.2760875       0.3333333

Gibbs Energy = -7.7546365705E+07 J   System Enthalpy =  3.5735586344E+07 J
     913.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   913.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -3.714140E+04 7.500956E-03 1.507153E+03 8.417000E+01
Ni                          -6.070066E+04 3.367255E-04 2.204805E+02 1.294000E+01
Al                          -1.411772E+05 8.378396E-09 5.967043E+01 1.610000E+00
Mo                          -5.350808E+04 8.684965E-04 1.042318E+01 1.000000E+00
Nb                          -1.279076E+05 4.811946E-08 2.583245E+00 2.400000E-01
C                           -4.013733E+04 5.054958E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 9.1069E+01 BCC_A2              0.9490197       0.0221976       0.0249879
 1.7034E+03 FCC_A1              0.8340344       0.1282466       0.0336937
 9.1461E+00 HCP_A3              0.0012334       0.0000407       0.0000000

                                 Mo              Nb              C
 9.1069E+01 BCC_A2              0.0037849       0.0000051       0.0000047
 1.7034E+03 FCC_A1              0.0038579       0.0000023       0.0001650
 9.1461E+00 HCP_A3              0.3834238       0.2819687       0.3333333

Gibbs Energy = -7.8807509816E+07 J   System Enthalpy =  3.6941272119E+07 J
     923.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   923.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -3.779711E+04 7.261570E-03 1.507153E+03 8.417000E+01
Ni                          -6.177365E+04 3.192851E-04 2.204805E+02 1.294000E+01
Al                          -1.418369E+05 9.404439E-09 5.967043E+01 1.610000E+00
Mo                          -5.433265E+04 8.419207E-04 1.042318E+01 1.000000E+00
Nb                          -1.284606E+05 5.374156E-08 2.583245E+00 2.400000E-01
C                           -4.028930E+04 5.248025E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 1.7947E+03 FCC_A1              0.8397770       0.1228512       0.0332483
 8.9488E+00 HCP_A3              0.0013550       0.0000428       0.0000000

                                 Mo              Nb              C
 1.7947E+03 FCC_A1              0.0039273       0.0000027       0.0001935
 8.9488E+00 HCP_A3              0.3771356       0.2881334       0.3333333

Gibbs Energy = -8.0081509349E+07 J   System Enthalpy =  3.7935882107E+07 J
     933.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   933.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm
```

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-3.849175E+04	6.999508E-03	1.507153E+03	8.417000E+01
Ni		-6.257826E+04	3.137632E-04	2.204805E+02	1.294000E+01
Al		-1.425491E+05	1.045902E-08	5.967043E+01	1.610000E+00
Mo		-5.526859E+04	8.050599E-04	1.042318E+01	1.000000E+00
Nb		-1.291554E+05	5.879322E-08	2.583245E+00	2.400000E-01
C		-4.020803E+04	5.610260E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt moles	Phase	Mole fraction of component within phase			
		Fe	Ni	Al	
1.7949E+03	FCC_A1	0.8396987	0.1228398	0.0332452	
8.7828E+00	HCP_A3	0.0015037	0.0000472	0.0000000	
		Mo	Nb	C	
1.7949E+03	FCC_A1	0.0039888	0.0000030	0.0002244	
8.7828E+00	HCP_A3	0.3716136	0.2935022	0.3333333	

Gibbs Energy = -8.1363267066E+07 J System Enthalpy = 3.8516045018E+07 J
     943.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   943.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-3.919427E+04	6.745382E-03	1.507153E+03	8.417000E+01
Ni		-6.338627E+04	3.083168E-04	2.204805E+02	1.294000E+01
Al		-1.432657E+05	1.159924E-08	5.967043E+01	1.610000E+00
Mo		-5.619547E+04	7.714365E-04	1.042318E+01	1.000000E+00
Nb		-1.298094E+05	6.453307E-08	2.583245E+00	2.400000E-01
C		-4.018155E+04	5.947311E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt moles	Phase	Mole fraction of component within phase			
		Fe	Ni	Al	
1.7950E+03	FCC_A1	0.8396147	0.1228276	0.0332419	
8.6043E+00	HCP_A3	0.0016544	0.0000517	0.0000000	
		Mo	Nb	C	
1.7950E+03	FCC_A1	0.0040549	0.0000035	0.0002575	
8.6043E+00	HCP_A3	0.3654610	0.2994996	0.3333333	

Gibbs Energy = -8.2651254951E+07 J System Enthalpy = 3.9098362994E+07 J
     953.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   953.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-3.989641E+04	6.505837E-03	1.507153E+03	8.417000E+01
Ni		-6.419723E+04	3.029637E-04	2.204805E+02	1.294000E+01
Al		-1.439844E+05	1.283234E-08	5.967043E+01	1.610000E+00
Mo		-5.712104E+04	7.400006E-04	1.042318E+01	1.000000E+00
Nb		-1.304229E+05	7.105663E-08	2.583245E+00	2.400000E-01
C		-4.021215E+04	6.251691E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount Phase Mole fraction of component within phase

compnt moles

		Fe	Ni	Al
1.7952E+03	FCC_A1	0.8395255	0.1228146	0.0332384
8.4148E+00	HCP_A3	0.0018048	0.0000564	0.0000000

		Mo	Nb	C
1.7952E+03	FCC_A1	0.0041249	0.0000040	0.0002926
8.4148E+00	HCP_A3	0.3586712	0.3061343	0.3333333

Gibbs Energy = -8.3945428376E+07 J System Enthalpy = 3.9682603668E+07 J
     963.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   963.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-4.060638E+04	6.273376E-03	1.507153E+03	8.417000E+01
Ni		-6.501189E+04	2.976743E-04	2.204805E+02	1.294000E+01
Al		-1.447061E+05	1.416160E-08	5.967043E+01	1.610000E+00
Mo		-5.804007E+04	7.110409E-04	1.042318E+01	1.000000E+00
Nb		-1.309963E+05	7.847502E-08	2.583245E+00	2.400000E-01
C		-4.029827E+04	6.519487E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount Phase Mole fraction of component within phase
compnt moles

		Fe	Ni	Al
1.7954E+03	FCC_A1	0.8394321	0.1228010	0.0332347
8.2161E+00	HCP_A3	0.0019524	0.0000612	0.0000000

		Mo	Nb	C
1.7954E+03	FCC_A1	0.0041981	0.0000046	0.0003295
8.2161E+00	HCP_A3	0.3512487	0.3134044	0.3333333

Gibbs Energy = -8.5245742172E+07 J System Enthalpy = 4.0268688407E+07 J
     973.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   973.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-4.132859E+04	6.044595E-03	1.507153E+03	8.417000E+01
Ni		-6.585337E+04	2.916148E-04	2.204805E+02	1.294000E+01
Al		-1.454265E+05	1.559927E-08	5.967043E+01	1.610000E+00
Mo		-5.895711E+04	6.839431E-04	1.042318E+01	1.000000E+00
Nb		-1.315370E+05	8.684273E-08	2.583245E+00	2.400000E-01
C		-4.043165E+04	6.753322E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount Phase Mole fraction of component within phase
compnt moles

		Fe	Ni	Al
1.7956E+03	FCC_A1	0.8393355	0.1227869	0.0332309
8.0103E+00	HCP_A3	0.0020951	0.0000661	0.0000000

		Mo	Nb	C
1.7956E+03	FCC_A1	0.0042737	0.0000053	0.0003677
8.0103E+00	HCP_A3	0.3432094	0.3212961	0.3333333

Gibbs Energy = -8.6552151262E+07 J System Enthalpy = 4.0856526646E+07 J
     983.000

*** MULTIPHASE - Stage 1* Results ***

Temperature =   983.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-4.203103E+04	5.842679E-03	1.507153E+03	8.417000E+01
Ni		-6.664919E+04	2.873994E-04	2.204805E+02	1.294000E+01
Al		-1.461625E+05	1.711650E-08	5.967043E+01	1.610000E+00
Mo		-5.987689E+04	6.581777E-04	1.042318E+01	1.000000E+00
Nb		-1.320286E+05	9.648080E-08	2.583245E+00	2.400000E-01
C		-4.063720E+04	6.929077E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	Ni	Al
1.7958E+03	FCC_A1	0.8392367	0.1227725	0.0332270
7.7997E+00	HCP_A3	0.0022308	0.0000710	0.0000000
		Mo	Nb	C
1.7958E+03	FCC_A1	0.0043509	0.0000062	0.0004067
7.7997E+00	HCP_A3	0.3345819	0.3297831	0.3333333

Gibbs Energy = -8.7864610527E+07 J   System Enthalpy = 4.1446020259E+07 J
     993.000
*** MULTIPHASE - Stage 1* Results ***

Temperature =   993.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-4.274937E+04	5.640500E-03	1.507153E+03	8.417000E+01
Ni		-6.747444E+04	2.823197E-04	2.204805E+02	1.294000E+01
Al		-1.468902E+05	1.876506E-08	5.967043E+01	1.610000E+00
Mo		-6.079669E+04	6.338712E-04	1.042318E+01	1.000000E+00
Nb		-1.324927E+05	1.073198E-07	2.583245E+00	2.400000E-01
C		-4.088490E+04	7.069550E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	Ni	Al
1.7961E+03	FCC_A1	0.8391368	0.1227579	0.0332231
7.5864E+00	HCP_A3	0.0023580	0.0000760	0.0000000
		Mo	Nb	C
1.7961E+03	FCC_A1	0.0044289	0.0000071	0.0004463
7.5864E+00	HCP_A3	0.3254068	0.3388259	0.3333333

Gibbs Energy = -8.9183074744E+07 J   System Enthalpy = 4.2037068725E+07 J
     1003.00
*** MULTIPHASE - Stage 1* Results ***

Temperature = 1003.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-4.347003E+04	5.447625E-03	1.507153E+03	8.417000E+01
Ni		-6.830030E+04	2.774080E-04	2.204805E+02	1.294000E+01
Al		-1.476256E+05	2.051584E-08	5.967043E+01	1.610000E+00
Mo		-6.171837E+04	6.107829E-04	1.042318E+01	1.000000E+00

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Nb                          -1.329228E+05 1.196104E-07 2.583245E+00 2.400000E-01
C                           -4.118741E+04 7.162745E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 1.7963E+03 FCC_A1              0.8390367       0.1227433       0.0332191
 7.3726E+00 HCP_A3              0.0024745       0.0000810       0.0000000

                                 Mo              Nb              C
 1.7963E+03 FCC_A1              0.0045068       0.0000083       0.0004859
 7.3726E+00 HCP_A3              0.3157392       0.3483720       0.3333333

Gibbs Energy = -9.0507498592E+07 J   System Enthalpy =  4.2629571718E+07 J
     1013.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1013.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -4.419304E+04 5.263491E-03 1.507153E+03 8.417000E+01
Ni                          -6.912988E+04 2.725559E-04 2.204805E+02 1.294000E+01
Al                          -1.483643E+05 2.238168E-08 5.967043E+01 1.610000E+00
Mo                          -6.264569E+04 5.885730E-04 1.042318E+01 1.000000E+00
Nb                          -1.333255E+05 1.334552E-07 2.583245E+00 2.400000E-01
C                           -4.153631E+04 7.215448E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 1.7965E+03 FCC_A1              0.8389376       0.1227288       0.0332152
 7.1606E+00 HCP_A3              0.0025803       0.0000859       0.0000000

                                 Mo              Nb              C
 1.7965E+03 FCC_A1              0.0045837       0.0000096       0.0005251
 7.1606E+00 HCP_A3              0.3056437       0.3583568       0.3333333

Gibbs Energy = -9.1837836689E+07 J   System Enthalpy =  4.3223436927E+07 J
     1023.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1023.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -4.492160E+04 5.085689E-03 1.507153E+03 8.417000E+01
Ni                          -6.996383E+04 2.677435E-04 2.204805E+02 1.294000E+01
Al                          -1.491054E+05 2.436883E-08 5.967043E+01 1.610000E+00
Mo                          -6.357837E+04 5.672233E-04 1.042318E+01 1.000000E+00
Nb                          -1.337023E+05 1.490378E-07 2.583245E+00 2.400000E-01
C                           -4.193263E+04 7.227088E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 1.7967E+03 FCC_A1              0.8388402       0.1227145       0.0332113
 6.9521E+00 HCP_A3              0.0026747       0.0000909       0.0000000

                                 Mo              Nb              C
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 1.7967E+03 FCC_A1             0.0046591       0.0000111       0.0005638
 6.9521E+00 HCP_A3             0.2951970       0.3687041       0.3333333

Gibbs Energy = -9.3174043672E+07 J   System Enthalpy =  4.3818579942E+07 J
     1033.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1033.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -4.565220E+04 4.915987E-03 1.507153E+03 8.417000E+01
Ni                          -7.080033E+04 2.630289E-04 2.204805E+02 1.294000E+01
Al                          -1.498502E+05 2.647721E-08 5.967043E+01 1.610000E+00
Mo                          -6.451743E+04 5.466333E-04 1.042318E+01 1.000000E+00
Nb                          -1.340574E+05 1.665050E-07 2.583245E+00 2.400000E-01
C                           -4.237215E+04 7.202206E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.7969E+03 FCC_A1             0.8387453       0.1227007       0.0332076
 6.7489E+00 HCP_A3             0.0027577       0.0000958       0.0000000

                                Mo              Nb              C
 1.7969E+03 FCC_A1             0.0047322       0.0000129       0.0006014
 6.7489E+00 HCP_A3             0.2844819       0.3793314       0.3333333

Gibbs Energy = -9.4516074309E+07 J   System Enthalpy =  4.4414930889E+07 J
     1043.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1043.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -4.631794E+04 4.790741E-03 1.507153E+03 8.417000E+01
Ni                          -7.163860E+04 2.584325E-04 2.204805E+02 1.294000E+01
Al                          -1.506004E+05 2.870440E-08 5.967043E+01 1.610000E+00
Mo                          -6.548703E+04 5.253113E-04 1.042318E+01 1.000000E+00
Nb                          -1.343888E+05 1.861342E-07 2.583245E+00 2.400000E-01
C                           -4.285924E+04 7.138621E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.7971E+03 FCC_A1             0.8386535       0.1226872       0.0332039
 6.5522E+00 HCP_A3             0.0028296       0.0001006       0.0000000

                                Mo              Nb              C
 1.7971E+03 FCC_A1             0.0048025       0.0000150       0.0006378
 6.5522E+00 HCP_A3             0.2735868       0.3901496       0.3333333

Gibbs Energy = -9.5863883634E+07 J   System Enthalpy =  4.5012433845E+07 J
     1053.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1053.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm
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Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -4.713043E+04 4.593335E-03 1.507153E+03 8.417000E+01
Ni                          -7.248080E+04 2.538872E-04 2.204805E+02 1.294000E+01
Al                          -1.513518E+05 3.106727E-08 5.967043E+01 1.610000E+00
Mo                          -6.641881E+04 5.073898E-04 1.042318E+01 1.000000E+00
Nb                          -1.347143E+05 2.077755E-07 2.583245E+00 2.400000E-01
C                           -4.337417E+04 7.054319E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe             Ni             Al
 1.7973E+03 FCC_A1             0.8385654      0.1226743      0.0332004
 6.3632E+00 HCP_A3             0.0028914      0.0001054      0.0000000

                                Mo             Nb             C
 1.7973E+03 FCC_A1             0.0048697      0.0000174      0.0006728
 6.3632E+00 HCP_A3             0.2626013      0.4010686      0.3333333

Gibbs Energy = -9.7217427082E+07 J   System Enthalpy =  4.5611048930E+07 J
     1063.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1063.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -4.786213E+04 4.448025E-03 1.507153E+03 8.417000E+01
Ni                          -7.332573E+04 2.494285E-04 2.204805E+02 1.294000E+01
Al                          -1.521068E+05 3.356041E-08 5.967043E+01 1.610000E+00
Mo                          -6.737679E+04 4.889481E-04 1.042318E+01 1.000000E+00
Nb                          -1.350194E+05 2.319870E-07 2.583245E+00 2.400000E-01
C                           -4.393519E+04 6.936301E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe             Ni             Al
 1.7975E+03 FCC_A1             0.8384812      0.1226620      0.0331971
 6.1824E+00 HCP_A3             0.0029439      0.0001101      0.0000000

                                Mo             Nb             C
 1.7975E+03 FCC_A1             0.0049334      0.0000201      0.0007063
 6.1824E+00 HCP_A3             0.2516130      0.4119995      0.3333333

Gibbs Energy = -9.8576660632E+07 J   System Enthalpy =  4.6210752274E+07 J
     1073.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1073.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -4.860265E+04 4.305639E-03 1.507153E+03 8.417000E+01
Ni                          -7.417528E+04 2.450017E-04 2.204805E+02 1.294000E+01
Al                          -1.528643E+05 3.619189E-08 5.967043E+01 1.610000E+00
Mo                          -6.834642E+04 4.708867E-04 1.042318E+01 1.000000E+00
Nb                          -1.353178E+05 2.586829E-07 2.583245E+00 2.400000E-01
C                           -4.452530E+04 6.800199E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
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```
                                  Fe              Ni              Al
 1.7976E+03 FCC_A1              0.8384010       0.1226502       0.0331939
 6.0102E+00 HCP_A3              0.0029885       0.0001148       0.0000000

                                  Mo              Nb              C
 1.7976E+03 FCC_A1              0.0049935       0.0000232       0.0007381
 6.0102E+00 HCP_A3              0.2407046       0.4228588       0.3333333

Gibbs Energy = -9.9941540941E+07 J   System Enthalpy =  4.6811535098E+07 J
     1083.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1083.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -4.939826E+04 4.144875E-03 1.507153E+03 8.417000E+01
Ni                          -7.504320E+04 2.402428E-04 2.204805E+02 1.294000E+01
Al                          -1.536024E+05 3.905918E-08 5.967043E+01 1.610000E+00
Mo                          -6.934985E+04 4.521079E-04 1.042318E+01 1.000000E+00
Nb                          -1.356234E+05 2.876429E-07 2.583245E+00 2.400000E-01
C                           -4.512564E+04 6.661635E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                  Fe              Ni              Al
 1.7978E+03 FCC_A1              0.8383250       0.1226391       0.0331909
 5.8469E+00 HCP_A3              0.0030264       0.0001194       0.0000000

                                  Mo              Nb              C
 1.7978E+03 FCC_A1              0.0050499       0.0000268       0.0007683
 5.8469E+00 HCP_A3              0.2299510       0.4335699       0.3333333

Gibbs Energy = -1.0131202545E+08 J   System Enthalpy =  4.7413402021E+07 J
     1093.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1093.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -5.010192E+04 4.033499E-03 1.507153E+03 8.417000E+01
Ni                          -7.587729E+04 2.365397E-04 2.204805E+02 1.294000E+01
Al                          -1.543927E+05 4.185360E-08 5.967043E+01 1.610000E+00
Mo                          -7.031192E+04 4.363821E-04 1.042318E+01 1.000000E+00
Nb                          -1.358976E+05 3.203291E-07 2.583245E+00 2.400000E-01
C                           -4.579361E+04 6.479947E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                  Fe              Ni              Al
 1.7979E+03 FCC_A1              0.8382530       0.1226285       0.0331881
 5.6922E+00 HCP_A3              0.0030588       0.0001239       0.0000000

                                  Mo              Nb              C
 1.7979E+03 FCC_A1              0.0051026       0.0000309       0.0007970
 5.6922E+00 HCP_A3              0.2194182       0.4440658       0.3333333

Gibbs Energy = -1.0268807250E+08 J   System Enthalpy =  4.8016369257E+07 J
     1103.00
*** MULTIPHASE - Stage 1* Results ***
```

Temperature = 1103.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-5.085304E+04	3.906782E-03	1.507153E+03	8.417000E+01
Ni		-7.673454E+04	2.323718E-04	2.204805E+02	1.294000E+01
Al		-1.551615E+05	4.489751E-08	5.967043E+01	1.610000E+00
Mo		-7.130688E+04	4.199657E-04	1.042318E+01	1.000000E+00
Nb		-1.361836E+05	3.555771E-07	2.583245E+00	2.400000E-01
C		-4.646584E+04	6.303446E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	Ni	Al
1.7981E+03	FCC_A1	0.8381849	0.1226185	0.0331854
5.5458E+00	HCP_A3	0.0030870	0.0001283	0.0000000
		Mo	Nb	C
1.7981E+03	FCC_A1	0.0051517	0.0000355	0.0008240
5.5458E+00	HCP_A3	0.2091622	0.4542892	0.3333333

Gibbs Energy = -1.0406964135E+08 J   System Enthalpy = 4.8620462201E+07 J
     1113.00
*** MULTIPHASE - Stage 1* Results ***

Temperature = 1113.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-5.165074E+04	3.767211E-03	1.507153E+03	8.417000E+01
Ni		-7.757905E+04	2.286646E-04	2.204805E+02	1.294000E+01
Al		-1.556785E+05	4.942832E-08	5.967043E+01	1.610000E+00
Mo		-7.146021E+04	4.429526E-04	1.042318E+01	1.000000E+00
Nb		-1.038218E+05	1.341596E-05	2.583245E+00	2.400000E-01
C		-4.038187E+04	1.273123E-02	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	Ni	Al
1.8036E+03	FCC_A1	0.8356172	0.1222419	0.0330833
		Mo	Nb	C
1.8036E+03	FCC_A1	0.0057790	0.0014322	0.0018464

Gibbs Energy = -1.0538774435E+08 J   System Enthalpy = 4.9636743854E+07 J
     1123.00
*** MULTIPHASE - Stage 1* Results ***

Temperature = 1123.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-5.250103E+04	3.614562E-03	1.507153E+03	8.417000E+01
Ni		-7.844551E+04	2.245528E-04	2.204805E+02	1.294000E+01
Al		-1.567084E+05	5.141980E-08	5.967043E+01	1.610000E+00
Mo		-7.332859E+04	3.884347E-04	1.042318E+01	1.000000E+00
Nb		-1.367653E+05	4.352431E-07	2.583245E+00	2.400000E-01
C		-4.786756E+04	5.937029E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

```
Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.7984E+03 FCC_A1              0.8380594       0.1226001       0.0331804
 5.2759E+00 HCP_A3              0.0031351       0.0001370       0.0000000

                                Mo              Nb              C
 1.7984E+03 FCC_A1              0.0052395       0.0000466       0.0008739
 5.2759E+00 HCP_A3              0.1896502       0.4737444       0.3333333

Gibbs Energy = -1.0684918670E+08 J   System Enthalpy =  4.9832162416E+07 J
     1133.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1133.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -5.312635E+04 3.554517E-03 1.507153E+03 8.417000E+01
Ni                          -7.932001E+04 2.203972E-04 2.204805E+02 1.294000E+01
Al                          -1.574865E+05 5.490246E-08 5.967043E+01 1.610000E+00
Mo                          -7.433633E+04 3.740785E-04 1.042318E+01 1.000000E+00
Nb                          -1.370455E+05 4.807936E-07 2.583245E+00 2.400000E-01
C                           -4.860744E+04 5.742621E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.7985E+03 FCC_A1              0.8380015       0.1225916       0.0331781
 5.1511E+00 HCP_A3              0.0031570       0.0001412       0.0000000

                                Mo              Nb              C
 1.7985E+03 FCC_A1              0.0052787       0.0000532       0.0008970
 5.1511E+00 HCP_A3              0.1804547       0.4829138       0.3333333

Gibbs Energy = -1.0824708687E+08 J   System Enthalpy =  5.0439849798E+07 J
     1143.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1143.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -5.389027E+04 3.445868E-03 1.507153E+03 8.417000E+01
Ni                          -8.018875E+04 2.165203E-04 2.204805E+02 1.294000E+01
Al                          -1.582709E+05 5.851470E-08 5.967043E+01 1.610000E+00
Mo                          -7.536130E+04 3.598371E-04 1.042318E+01 1.000000E+00
Nb                          -1.373400E+05 5.293926E-07 2.583245E+00 2.400000E-01
C                           -4.935320E+04 5.554381E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.7986E+03 FCC_A1              0.8379462       0.1225835       0.0331759
 5.0322E+00 HCP_A3              0.0031784       0.0001455       0.0000000

                                Mo              Nb              C
 1.7986E+03 FCC_A1              0.0053149       0.0000606       0.0009190
 5.0322E+00 HCP_A3              0.1716577       0.4916851       0.3333333
```

Gibbs Energy = -1.0965035626E+08 J System Enthalpy = 5.1048820200E+07 J
     1153.00
*** MULTIPHASE - Stage 1* Results ***

Temperature = 1153.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-5.465689E+04	3.341395E-03	1.507153E+03	8.417000E+01
Ni		-8.106515E+04	2.126075E-04	2.204805E+02	1.294000E+01
Al		-1.590643E+05	6.223785E-08	5.967043E+01	1.610000E+00
Mo		-7.639453E+04	3.460727E-04	1.042318E+01	1.000000E+00
Nb		-1.376409E+05	5.815358E-07	2.583245E+00	2.400000E-01
C		-5.010980E+04	5.369340E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	Ni	Al
1.7987E+03	FCC_A1	0.8378934	0.1225757	0.0331738
4.9185E+00	HCP_A3	0.0032001	0.0001496	0.0000000
		Mo	Nb	C
1.7987E+03	FCC_A1	0.0053483	0.0000688	0.0009400
4.9185E+00	HCP_A3	0.1632686	0.5000483	0.3333333

Gibbs Energy = -1.1105895930E+08 J System Enthalpy = 5.1659119086E+07 J
     1163.00
*** MULTIPHASE - Stage 1* Results ***

Temperature = 1163.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-5.546723E+04	3.227185E-03	1.507153E+03	8.417000E+01
Ni		-8.191979E+04	2.093011E-04	2.204805E+02	1.294000E+01
Al		-1.596135E+05	6.781807E-08	5.967043E+01	1.610000E+00
Mo		-7.685669E+04	3.533202E-04	1.042318E+01	1.000000E+00
Nb		-1.100588E+05	1.140186E-05	2.583245E+00	2.400000E-01
C		-4.493631E+04	9.589468E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	Ni	Al
1.8036E+03	FCC_A1	0.8356172	0.1222419	0.0330833
		Mo	Nb	C
1.8036E+03	FCC_A1	0.0057790	0.0014322	0.0018464

Gibbs Energy = -1.1241852368E+08 J System Enthalpy = 5.2648388477E+07 J
     1173.00
*** MULTIPHASE - Stage 1* Results ***

Temperature = 1173.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-5.620016E+04	3.143580E-03	1.507153E+03	8.417000E+01
Ni		-8.280910E+04	2.053698E-04	2.204805E+02	1.294000E+01
Al		-1.606320E+05	7.032479E-08	5.967043E+01	1.610000E+00
Mo		-7.847329E+04	3.203384E-04	1.042318E+01	1.000000E+00

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Nb                          -1.382541E+05 6.975703E-07 2.583245E+00 2.400000E-01
C                           -5.166260E+04 5.005882E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 1.7989E+03 FCC_A1              0.8377934       0.1225611       0.0331698
 4.7034E+00 HCP_A3              0.0032464       0.0001579       0.0000000

                                 Mo              Nb              C
 1.7989E+03 FCC_A1              0.0054079       0.0000881       0.0009797
 4.7034E+00 HCP_A3              0.1477196       0.5155427       0.3333333

Gibbs Energy = -1.1389202916E+08 J   System Enthalpy =  5.2883885503E+07 J
     1183.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1183.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -5.699580E+04 3.044031E-03 1.507153E+03 8.417000E+01
Ni                          -8.369514E+04 2.016442E-04 2.204805E+02 1.294000E+01
Al                          -1.612263E+05 7.609065E-08 5.967043E+01 1.610000E+00
Mo                          -7.903795E+04 3.237546E-04 1.042318E+01 1.000000E+00
Nb                          -1.125758E+05 1.070064E-05 2.583245E+00 2.400000E-01
C                           -4.676590E+04 8.612563E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 1.8036E+03 FCC_A1              0.8356172       0.1222419       0.0330833

                                 Mo              Nb              C
 1.8036E+03 FCC_A1              0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.1526754377E+08 J   System Enthalpy =  5.3863505039E+07 J
     1193.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1193.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -5.779197E+04 2.949065E-03 1.507153E+03 8.417000E+01
Ni                          -8.455827E+04 1.985048E-04 2.204805E+02 1.294000E+01
Al                          -1.620070E+05 8.068995E-08 5.967043E+01 1.610000E+00
Mo                          -8.012454E+04 3.103799E-04 1.042318E+01 1.000000E+00
Nb                          -1.138301E+05 1.037903E-05 2.583245E+00 2.400000E-01
C                           -4.769124E+04 8.164442E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 1.8036E+03 FCC_A1              0.8356172       0.1222419       0.0330833

                                 Mo              Nb              C
 1.8036E+03 FCC_A1              0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.1669979205E+08 J   System Enthalpy =  5.4473310545E+07 J
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     1203.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1203.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -5.853454E+04 2.873928E-03 1.507153E+03 8.417000E+01
Ni                          -8.545578E+04 1.947945E-04 2.204805E+02 1.294000E+01
Al                          -1.630183E+05 8.353558E-08 5.967043E+01 1.610000E+00
Mo                          -8.163667E+04 2.853641E-04 1.042318E+01 1.000000E+00
Nb                          -1.392284E+05 9.011800E-07 2.583245E+00 2.400000E-01
C                           -5.404269E+04 4.503070E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.7992E+03 FCC_A1             0.8376529       0.1225405       0.0331642
 4.4009E+00 HCP_A3             0.0033287       0.0001703       0.0000000

                                Mo              Nb              C
 1.7992E+03 FCC_A1             0.0054815       0.0001252       0.0010356
 4.4009E+00 HCP_A3             0.1273745       0.5357932       0.3333333

Gibbs Energy = -1.1818080437E+08 J   System Enthalpy =  5.4732131017E+07 J
     1213.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1213.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -5.936000E+04 2.778964E-03 1.507153E+03 8.417000E+01
Ni                          -8.633552E+04 1.915503E-04 2.204805E+02 1.294000E+01
Al                          -1.636157E+05 9.005338E-08 5.967043E+01 1.610000E+00
Mo                          -8.231688E+04 2.853187E-04 1.042318E+01 1.000000E+00
Nb                          -1.163578E+05 9.760754E-06 2.583245E+00 2.400000E-01
C                           -4.953748E+04 7.359578E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.1957961210E+08 J   System Enthalpy =  5.5697422534E+07 J
     1223.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1223.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -6.014556E+04 2.699186E-03 1.507153E+03 8.417000E+01
Ni                          -8.721951E+04 1.883332E-04 2.204805E+02 1.294000E+01
Al                          -1.644246E+05 9.496422E-08 5.967043E+01 1.610000E+00
Mo                          -8.341467E+04 2.737966E-04 1.042318E+01 1.000000E+00
Nb                          -1.176232E+05 9.471275E-06 2.583245E+00 2.400000E-01
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C                          -5.046260E+04 6.994936E-03 3.330281E+00 4.000000E-02
Total                                                 1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.2102712425E+08 J   System Enthalpy =  5.6311731469E+07 J
     1233.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1233.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -6.097107E+04 2.612734E-03 1.507153E+03 8.417000E+01
Ni                          -8.804824E+04 1.862218E-04 2.204805E+02 1.294000E+01
Al                          -1.652053E+05 1.003326E-07 5.967043E+01 1.610000E+00
Mo                          -8.450177E+04 2.631899E-04 1.042318E+01 1.000000E+00
Nb                          -1.188779E+05 9.204515E-06 2.583245E+00 2.400000E-01
C                           -5.140333E+04 6.643719E-03 3.330281E+00 4.000000E-02
Total                                                 1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.2247966555E+08 J   System Enthalpy =  5.6927543879E+07 J
     1243.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1243.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -6.178318E+04 2.533660E-03 1.507153E+03 8.417000E+01
Ni                          -8.891052E+04 1.835709E-04 2.204805E+02 1.294000E+01
Al                          -1.660212E+05 1.055510E-07 5.967043E+01 1.610000E+00
Mo                          -8.560298E+04 2.528093E-04 1.042318E+01 1.000000E+00
Nb                          -1.201466E+05 8.937214E-06 2.583245E+00 2.400000E-01
C                           -5.233441E+04 6.321268E-03 3.330281E+00 4.000000E-02
Total                                                 1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.2393720741E+08 J   System Enthalpy =  5.7544860879E+07 J
     1253.00
*** MULTIPHASE - Stage 1* Results ***
```

Temperature = 1253.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-6.242493E+04	2.498712E-03	1.507153E+03	8.417000E+01
Ni		-9.004307E+04	1.763638E-04	2.204805E+02	1.294000E+01
Al		-1.669949E+05	1.092825E-07	5.967043E+01	1.610000E+00
Mo		-8.676882E+04	2.414917E-04	1.042318E+01	1.000000E+00
Nb		-1.214799E+05	8.628125E-06	2.583245E+00	2.400000E-01
C		-5.320580E+04	6.053833E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt	Phase	Mole fraction of component within phase moles		
		Fe	Ni	Al
1.8036E+03	FCC_A1	0.8356172	0.1222419	0.0330833
		Mo	Nb	C
1.8036E+03	FCC_A1	0.0057790	0.0014322	0.0018464

Gibbs Energy = -1.2539972170E+08 J   System Enthalpy = 5.8163683544E+07 J
     1263.00
*** MULTIPHASE - Stage 1* Results ***

Temperature = 1263.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-6.331592E+04	2.406978E-03	1.507153E+03	8.417000E+01
Ni		-9.081028E+04	1.755498E-04	2.204805E+02	1.294000E+01
Al		-1.676846E+05	1.161837E-07	5.967043E+01	1.610000E+00
Mo		-8.783511E+04	2.330467E-04	1.042318E+01	1.000000E+00
Nb		-1.227135E+05	8.413791E-06	2.583245E+00	2.400000E-01
C		-5.418035E+04	5.744967E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt	Phase	Mole fraction of component within phase moles		
		Fe	Ni	Al
1.8036E+03	FCC_A1	0.8356172	0.1222419	0.0330833
		Mo	Nb	C
1.8036E+03	FCC_A1	0.0057790	0.0014322	0.0018464

Gibbs Energy = -1.2686718079E+08 J   System Enthalpy = 5.8784012878E+07 J
     1273.00
*** MULTIPHASE - Stage 1* Results ***

Temperature = 1273.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-6.412608E+04	2.337757E-03	1.507153E+03	8.417000E+01
Ni		-9.171901E+04	1.724311E-04	2.204805E+02	1.294000E+01
Al		-1.685075E+05	1.218587E-07	5.967043E+01	1.610000E+00
Mo		-8.894953E+04	2.240019E-04	1.042318E+01	1.000000E+00
Nb		-1.239954E+05	8.170762E-06	2.583245E+00	2.400000E-01
C		-5.511319E+04	5.477895E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount compnt	Phase	Mole fraction of component within phase moles

```
                                  Fe              Ni              Al
 1.8036E+03 FCC_A1              0.8356172       0.1222419       0.0330833

                                  Mo              Nb              C
 1.8036E+03 FCC_A1              0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.2833955743E+08 J   System Enthalpy =  5.9405849911E+07 J
     1283.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1283.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -6.483953E+04 2.292249E-03 1.507153E+03 8.417000E+01
Ni                          -9.234019E+04 1.740439E-04 2.204805E+02 1.294000E+01
Al                          -1.693789E+05 1.271357E-07 5.967043E+01 1.610000E+00
Mo                          -8.997688E+04 2.172067E-04 1.042318E+01 1.000000E+00
Nb                          -1.251941E+05 8.000432E-06 2.583245E+00 2.400000E-01
C                           -5.612680E+04 5.187682E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                  Fe              Ni              Al
 1.8036E+03 FCC_A1              0.8356172       0.1222419       0.0330833

                                  Mo              Nb              C
 1.8036E+03 FCC_A1              0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.2981682484E+08 J   System Enthalpy =  6.0029195625E+07 J
     1293.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1293.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -6.575644E+04 2.206160E-03 1.507153E+03 8.417000E+01
Ni                          -9.355358E+04 1.662325E-04 2.204805E+02 1.294000E+01
Al                          -1.701746E+05 1.334924E-07 5.967043E+01 1.610000E+00
Mo                          -9.118358E+04 2.072320E-04 1.042318E+01 1.000000E+00
Nb                          -1.265716E+05 7.707034E-06 2.583245E+00 2.400000E-01
C                           -5.697260E+04 4.994335E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                  Fe              Ni              Al
 1.8036E+03 FCC_A1              0.8356172       0.1222419       0.0330833

                                  Mo              Nb              C
 1.8036E+03 FCC_A1              0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.3129895667E+08 J   System Enthalpy =  6.0654050983E+07 J
     1303.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1303.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
```

Fe	-6.652637E+04	2.153572E-03	1.507153E+03	8.417000E+01
Ni	-9.446788E+04	1.633311E-04	2.204805E+02	1.294000E+01
Al	-1.711168E+05	1.381800E-07	5.967043E+01	1.610000E+00
Mo	-9.247596E+04	1.962994E-04	1.042318E+01	1.000000E+00
Nb	-1.430059E+05	1.850660E-06	2.583245E+00	2.400000E-01
C	-6.206092E+04	3.252113E-03	3.330281E+00	4.000000E-02
Total			1.803641E+03	1.000000E+02

Amount	Phase	Mole fraction of component within phase		
compnt moles				
		Fe	Ni	Al
1.8003E+03	FCC_A1	0.8371716	0.1224699	0.0331451
3.3641E+00	HCP_A3	0.0037753	0.0002136	0.0000000
		Mo	Nb	C
1.8003E+03	FCC_A1	0.0056388	0.0003476	0.0012270
3.3641E+00	HCP_A3	0.0808032	0.5818747	0.3333333

Gibbs Energy = -1.3280672090E+08 J System Enthalpy = 6.1002377606E+07 J
     1313.00
*** MULTIPHASE - Stage 1* Results ***

Temperature = 1313.0000 K

Fixed pressure = 1.013250E+05 Pa, 1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-6.734450E+04	2.093745E-03	1.507153E+03	8.417000E+01
Ni		-9.535913E+04	1.608627E-04	2.204805E+02	1.294000E+01
Al		-1.718154E+05	1.461831E-07	5.967043E+01	1.610000E+00
Mo		-9.341479E+04	1.922226E-04	1.042318E+01	1.000000E+00
Nb		-1.291289E+05	7.295233E-06	2.583245E+00	2.400000E-01
C		-5.886573E+04	4.552222E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount	Phase	Mole fraction of component within phase		
compnt moles				
		Fe	Ni	Al
1.8036E+03	FCC_A1	0.8356172	0.1222419	0.0330833
		Mo	Nb	C
1.8036E+03	FCC_A1	0.0057790	0.0014322	0.0018464

Gibbs Energy = -1.3427771021E+08 J System Enthalpy = 6.1908294377E+07 J
     1323.00
*** MULTIPHASE - Stage 1* Results ***

Temperature = 1323.0000 K

Fixed pressure = 1.013250E+05 Pa, 1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-6.812901E+04	2.042681E-03	1.507153E+03	8.417000E+01
Ni		-9.628577E+04	1.579591E-04	2.204805E+02	1.294000E+01
Al		-1.728009E+05	1.505406E-07	5.967043E+01	1.610000E+00
Mo		-9.468611E+04	1.826841E-04	1.042318E+01	1.000000E+00
Nb		-1.438573E+05	2.091091E-06	2.583245E+00	2.400000E-01
C		-6.364349E+04	3.071095E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount	Phase	Mole fraction of component within phase		
compnt moles				
		Fe	Ni	Al
1.8005E+03	FCC_A1	0.8370583	0.1224533	0.0331406
3.1198E+00	HCP_A3	0.0039020	0.0002230	0.0000000

```
                                  Mo              Nb              C
 1.8005E+03 FCC_A1              0.0056599       0.0004158       0.0012720
 3.1198E+00 HCP_A3              0.0744710       0.5880707       0.3333333

Gibbs Energy = -1.3579127053E+08 J   System Enthalpy =  6.2278801068E+07 J
     1333.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1333.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -6.897259E+04 1.983005E-03 1.507153E+03 8.417000E+01
Ni                          -9.719702E+04 1.553657E-04 2.204805E+02 1.294000E+01
Al                          -1.734837E+05 1.592489E-07 5.967043E+01 1.610000E+00
Mo                          -9.566148E+04 1.784536E-04 1.042318E+01 1.000000E+00
Nb                          -1.317098E+05 6.902059E-06 2.583245E+00 2.400000E-01
C                           -6.075231E+04 4.163260E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                  Fe              Ni              Al
 1.8036E+03 FCC_A1              0.8356172       0.1222419       0.0330833

                                  Mo              Nb              C
 1.8036E+03 FCC_A1              0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.3727561534E+08 J   System Enthalpy =  6.3168587540E+07 J
     1343.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1343.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -6.979375E+04 1.929792E-03 1.507153E+03 8.417000E+01
Ni                          -9.811918E+04 1.527036E-04 2.204805E+02 1.294000E+01
Al                          -1.743222E+05 1.659910E-07 5.967043E+01 1.610000E+00
Mo                          -9.678899E+04 1.720220E-04 1.042318E+01 1.000000E+00
Nb                          -1.330044E+05 6.715178E-06 2.583245E+00 2.400000E-01
C                           -6.169725E+04 3.984811E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                  Fe              Ni              Al
 1.8036E+03 FCC_A1              0.8356172       0.1222419       0.0330833

                                  Mo              Nb              C
 1.8036E+03 FCC_A1              0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.3878168809E+08 J   System Enthalpy =  6.3801005068E+07 J
     1353.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1353.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -7.061431E+04 1.878862E-03 1.507153E+03 8.417000E+01
```

```
Ni                          -9.904550E+04 1.500697E-04 2.204805E+02 1.294000E+01
Al                          -1.751638E+05 1.728637E-07 5.967043E+01 1.610000E+00
Mo                          -9.791885E+04 1.658777E-04 1.042318E+01 1.000000E+00
Nb                          -1.343010E+05 6.534818E-06 2.583245E+00 2.400000E-01
C                           -6.264395E+04 3.815884E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.4029247550E+08 J   System Enthalpy =  6.4434937755E+07 J
     1363.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1363.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -7.143887E+04 1.829350E-03 1.507153E+03 8.417000E+01
Ni                          -9.997401E+04 1.474904E-04 2.204805E+02 1.294000E+01
Al                          -1.760081E+05 1.798715E-07 5.967043E+01 1.610000E+00
Mo                          -9.905083E+04 1.600082E-04 1.042318E+01 1.000000E+00
Nb                          -1.356001E+05 6.360482E-06 2.583245E+00 2.400000E-01
C                           -6.359201E+04 3.656003E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.4180795393E+08 J   System Enthalpy =  6.5070386498E+07 J
     1373.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1373.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -7.226352E+04 1.781821E-03 1.507153E+03 8.417000E+01
Ni                          -1.008990E+05 1.450367E-04 2.204805E+02 1.294000E+01
Al                          -1.768535E+05 1.870366E-07 5.967043E+01 1.610000E+00
Mo                          -1.001827E+05 1.544283E-04 1.042318E+01 1.000000E+00
Nb                          -1.368989E+05 6.193368E-06 2.583245E+00 2.400000E-01
C                           -6.454408E+04 3.503775E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464
```

Gibbs Energy = -1.4332810008E+08 J System Enthalpy = 6.5707352201E+07 J
     1383.00
*** MULTIPHASE - Stage 1* Results ***

Temperature = 1383.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-7.310093E+04	1.734262E-03	1.507153E+03	8.417000E+01
Ni		-1.018399E+05	1.424619E-04	2.204805E+02	1.294000E+01
Al		-1.776992E+05	1.943727E-07	5.967043E+01	1.610000E+00
Mo		-1.013231E+05	1.490098E-04	1.042318E+01	1.000000E+00
Nb		-1.382054E+05	6.028930E-06	2.583245E+00	2.400000E-01
C		-6.549220E+04	3.361107E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount	Phase	Mole fraction of component within phase		
compnt moles				
		Fe	Ni	Al
1.8036E+03	FCC_A1	0.8356172	0.1222419	0.0330833
		Mo	Nb	C
1.8036E+03	FCC_A1	0.0057790	0.0014322	0.0018464

Gibbs Energy = -1.4485289102E+08 J System Enthalpy = 6.6345835732E+07 J
     1393.00
*** MULTIPHASE - Stage 1* Results ***

Temperature = 1393.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-7.391194E+04	1.692481E-03	1.507153E+03	8.417000E+01
Ni		-1.027623E+05	1.401914E-04	2.204805E+02	1.294000E+01
Al		-1.785493E+05	2.018067E-07	5.967043E+01	1.610000E+00
Mo		-1.024525E+05	1.439922E-04	1.042318E+01	1.000000E+00
Nb		-1.395019E+05	5.876217E-06	2.583245E+00	2.400000E-01
C		-6.645407E+04	3.222341E-03	3.330281E+00	4.000000E-02
Total				1.803641E+03	1.000000E+02

Amount	Phase	Mole fraction of component within phase		
compnt moles				
		Fe	Ni	Al
1.8036E+03	FCC_A1	0.8356172	0.1222419	0.0330833
		Mo	Nb	C
1.8036E+03	FCC_A1	0.0057790	0.0014322	0.0018464

Gibbs Energy = -1.4638230412E+08 J System Enthalpy = 6.6985837995E+07 J
     1403.00
*** MULTIPHASE - Stage 1* Results ***

Temperature = 1403.0000 K

Fixed pressure = 1.013250E+05 Pa,   1.000000E+00 atm

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-7.485496E+04	1.633690E-03	1.507153E+03	8.417000E+01
Ni		-1.035333E+05	1.397920E-04	2.204805E+02	1.294000E+01
Al		-1.792256E+05	2.125591E-07	5.967043E+01	1.610000E+00
Mo		-1.035356E+05	1.397644E-04	1.042318E+01	1.000000E+00
Nb		-1.407506E+05	5.752947E-06	2.583245E+00	2.400000E-01
C		-6.746736E+04	3.077570E-03	3.330281E+00	4.000000E-02

```
Total                                                 1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.4791631712E+08 J   System Enthalpy =  6.7627359877E+07 J
     1413.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1413.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -7.560141E+04 1.604349E-03 1.507153E+03 8.417000E+01
Ni                          -1.046591E+05 1.352527E-04 2.204805E+02 1.294000E+01
Al                          -1.802586E+05 2.170263E-07 5.967043E+01 1.610000E+00
Mo                          -1.047465E+05 1.342504E-04 1.042318E+01 1.000000E+00
Nb                          -1.421282E+05 5.572529E-06 2.583245E+00 2.400000E-01
C                           -6.835554E+04 2.972703E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.4945490808E+08 J   System Enthalpy =  6.8270402254E+07 J
     1423.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1423.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -7.643714E+04 1.564089E-03 1.507153E+03 8.417000E+01
Ni                          -1.055970E+05 1.330163E-04 2.204805E+02 1.294000E+01
Al                          -1.811135E+05 2.248848E-07 5.967043E+01 1.610000E+00
Mo                          -1.058899E+05 1.297645E-04 1.042318E+01 1.000000E+00
Nb                          -1.434371E+05 5.431596E-06 2.583245E+00 2.400000E-01
C                           -6.931600E+04 2.855312E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.5099805534E+08 J   System Enthalpy =  6.8914966035E+07 J
     1433.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1433.0000 K
```

```
Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -7.725401E+04 1.527798E-03 1.507153E+03 8.417000E+01
Ni                          -1.069243E+05 1.266406E-04 2.204805E+02 1.294000E+01
Al                          -1.820802E+05 2.307359E-07 5.967043E+01 1.610000E+00
Mo                          -1.071518E+05 1.242455E-04 1.042318E+01 1.000000E+00
Nb                          -1.448665E+05 5.242872E-06 2.583245E+00 2.400000E-01
C                           -7.015971E+04 2.771122E-03 3.330280E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.5254573754E+08 J   System Enthalpy =  6.9561052131E+07 J
     1443.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1443.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -7.812513E+04 1.486099E-03 1.507153E+03 8.417000E+01
Ni                          -1.074890E+05 1.285703E-04 2.204805E+02 1.294000E+01
Al                          -1.828353E+05 2.408665E-07 5.967043E+01 1.610000E+00
Mo                          -1.081852E+05 1.213228E-04 1.042318E+01 1.000000E+00
Nb                          -1.460663E+05 5.160968E-06 2.583245E+00 2.400000E-01
C                           -7.123653E+04 2.638757E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.5409793379E+08 J   System Enthalpy =  7.0208661344E+07 J
     1453.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1453.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -7.896272E+04 1.450108E-03 1.507153E+03 8.417000E+01
Ni                          -1.084429E+05 1.263653E-04 2.204805E+02 1.294000E+01
Al                          -1.837442E+05 2.481137E-07 5.967043E+01 1.610000E+00
Mo                          -1.093548E+05 1.171786E-04 1.042318E+01 1.000000E+00
Nb                          -1.502517E+05 3.968815E-06 2.583245E+00 2.400000E-01
C                           -7.326658E+04 2.323639E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
```

```
 1.8027E+03 FCC_A1             0.8360340       0.1223031       0.0330999
 9.0476E-01 HCP_A3             0.0050687       0.0002962       0.0000000

                                Mo              Nb              C
 1.8027E+03 FCC_A1             0.0057580       0.0011249       0.0016801
 9.0476E-01 HCP_A3             0.0475905       0.6137115       0.3333330

Gibbs Energy = -1.5565561625E+08 J   System Enthalpy =  7.0781590656E+07 J
     1463.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1463.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -7.987737E+04 1.406524E-03 1.507153E+03 8.417000E+01
Ni                          -1.090909E+05 1.273909E-04 2.204805E+02 1.294000E+01
Al                          -1.843303E+05 2.623464E-07 5.967043E+01 1.610000E+00
Mo                          -1.103705E+05 1.146711E-04 1.042318E+01 1.000000E+00
Nb                          -1.485838E+05 4.955961E-06 2.583245E+00 2.400000E-01
C                           -7.328313E+04 2.418692E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase              Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.5721578549E+08 J   System Enthalpy =  7.1508452959E+07 J
     1473.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1473.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -8.067035E+04 1.378443E-03 1.507153E+03 8.417000E+01
Ni                          -1.103540E+05 1.221209E-04 2.204805E+02 1.294000E+01
Al                          -1.854520E+05 2.653244E-07 5.967043E+01 1.610000E+00
Mo                          -1.116556E+05 1.098088E-04 1.042318E+01 1.000000E+00
Nb                          -1.513577E+05 4.293193E-06 2.583245E+00 2.400000E-01
C                           -7.463993E+04 2.255435E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase              Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8032E+03 FCC_A1             0.8358199       0.1222717       0.0330914
 4.4021E-01 HCP_A3             0.0053159       0.0003100       0.0000000

                                Mo              Nb              C
 1.8032E+03 FCC_A1             0.0057693       0.0012822       0.0017655
 4.4021E-01 HCP_A3             0.0452061       0.6158350       0.3333330

Gibbs Energy = -1.5878162222E+08 J   System Enthalpy =  7.2123527112E+07 J
     1483.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1483.0000 K
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Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -8.149163E+04 1.348191E-03 1.507153E+03 8.417000E+01
Ni                          -1.114151E+05 1.190710E-04 2.204805E+02 1.294000E+01
Al                          -1.864403E+05 2.712141E-07 5.967043E+01 1.610000E+00
Mo                          -1.128373E+05 1.060991E-04 1.042318E+01 1.000000E+00
Nb                          -1.513984E+05 4.650913E-06 2.583245E+00 2.400000E-01
C                           -7.504700E+04 2.273737E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.6035144812E+08 J   System Enthalpy =  7.2814348082E+07 J
     1493.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1493.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -8.243106E+04 1.306501E-03 1.507153E+03 8.417000E+01
Ni                          -1.119825E+05 1.208481E-04 2.204805E+02 1.294000E+01
Al                          -1.869340E+05 2.884182E-07 5.967043E+01 1.610000E+00
Mo                          -1.138446E+05 1.040138E-04 1.042318E+01 1.000000E+00
Nb                          -1.525560E+05 4.599961E-06 2.583245E+00 2.400000E-01
C                           -7.618388E+04 2.161078E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.6192590905E+08 J   System Enthalpy =  7.3469586718E+07 J
     1503.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1503.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -8.324387E+04 1.279528E-03 1.507153E+03 8.417000E+01
Ni                          -1.132354E+05 1.160813E-04 2.204805E+02 1.294000E+01
Al                          -1.880451E+05 2.916910E-07 5.967043E+01 1.610000E+00
Mo                          -1.151266E+05 9.977877E-05 1.042318E+01 1.000000E+00
Nb                          -1.540041E+05 4.445708E-06 2.583245E+00 2.400000E-01
C                           -7.703385E+04 2.103124E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833
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                                  Mo             Nb             C
 1.8036E+03 FCC_A1             0.0057790      0.0014322      0.0018464

Gibbs Energy = -1.6350476385E+08 J   System Enthalpy =  7.4126353957E+07 J
     1513.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1513.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -8.400253E+04 1.258866E-03 1.507153E+03 8.417000E+01
Ni                          -1.138278E+05 1.175771E-04 2.204805E+02 1.294000E+01
Al                          -1.888523E+05 3.021684E-07 5.967043E+01 1.610000E+00
Mo                          -1.160951E+05 9.818506E-05 1.042318E+01 1.000000E+00
Nb                          -1.551859E+05 4.390498E-06 2.583245E+00 2.400000E-01
C                           -7.815353E+04 2.004031E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                  Fe             Ni             Al
 1.8036E+03 FCC_A1             0.8356172      0.1222419      0.0330833

                                  Mo             Nb             C
 1.8036E+03 FCC_A1             0.0057790      0.0014322      0.0018464

Gibbs Energy = -1.6508799345E+08 J   System Enthalpy =  7.4784650723E+07 J
     1523.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1523.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -8.501684E+04 1.214042E-03 1.507153E+03 8.417000E+01
Ni                          -1.149672E+05 1.140374E-04 2.204805E+02 1.294000E+01
Al                          -1.896080E+05 3.141526E-07 5.967043E+01 1.610000E+00
Mo                          -1.173080E+05 9.479060E-05 1.042318E+01 1.000000E+00
Nb                          -1.565671E+05 4.268959E-06 2.583245E+00 2.400000E-01
C                           -7.907737E+04 1.940599E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                  Fe             Ni             Al
 1.8036E+03 FCC_A1             0.8356172      0.1222419      0.0330833

                                  Mo             Nb             C
 1.8036E+03 FCC_A1             0.0057790      0.0014322      0.0018464

Gibbs Energy = -1.6667557909E+08 J   System Enthalpy =  7.5444477937E+07 J
     1533.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1533.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -8.583859E+04 1.189199E-03 1.507153E+03 8.417000E+01
Ni                          -1.161397E+05 1.103614E-04 2.204805E+02 1.294000E+01
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Al                          -1.906810E+05 3.184186E-07 5.967043E+01 1.610000E+00
Mo                          -1.186265E+05 9.079966E-05 1.042318E+01 1.000000E+00
Nb                          -1.580012E+05 4.135098E-06 2.583245E+00 2.400000E-01
C                           -7.995174E+04 1.887273E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 1.8036E+03 FCC_A1              0.8356172       0.1222419       0.0330833

                                 Mo              Nb              C
 1.8036E+03 FCC_A1              0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.6826750219E+08 J   System Enthalpy =  7.6105836514E+07 J
     1543.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1543.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -8.670809E+04 1.160848E-03 1.507153E+03 8.417000E+01
Ni                          -1.171124E+05 1.085262E-04 2.204805E+02 1.294000E+01
Al                          -1.915631E+05 3.275258E-07 5.967043E+01 1.610000E+00
Mo                          -1.197969E+05 8.803603E-05 1.042318E+01 1.000000E+00
Nb                          -1.593373E+05 4.037823E-06 2.583245E+00 2.400000E-01
C                           -8.092759E+04 1.821611E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 1.8036E+03 FCC_A1              0.8356172       0.1222419       0.0330833

                                 Mo              Nb              C
 1.8036E+03 FCC_A1              0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.6986374445E+08 J   System Enthalpy =  7.6768727399E+07 J
     1553.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1553.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -8.756989E+04 1.134201E-03 1.507153E+03 8.417000E+01
Ni                          -1.180855E+05 1.067415E-04 2.204805E+02 1.294000E+01
Al                          -1.924388E+05 3.369352E-07 5.967043E+01 1.610000E+00
Mo                          -1.209623E+05 8.542303E-05 1.042318E+01 1.000000E+00
Nb                          -1.606698E+05 3.945113E-06 2.583245E+00 2.400000E-01
C                           -8.191036E+04 1.758092E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                 Fe              Ni              Al
 1.8036E+03 FCC_A1              0.8356172       0.1222419       0.0330833

                                 Mo              Nb              C
 1.8036E+03 FCC_A1              0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.7146428781E+08 J   System Enthalpy =  7.7433151504E+07 J
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     1563.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1563.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -8.845439E+04 1.106561E-03 1.507153E+03 8.417000E+01
Ni                          -1.190654E+05 1.049535E-04 2.204805E+02 1.294000E+01
Al                          -1.933350E+05 3.459461E-07 5.967043E+01 1.610000E+00
Mo                          -1.221451E+05 8.280899E-05 1.042318E+01 1.000000E+00
Nb                          -1.620161E+05 3.851629E-06 2.583245E+00 2.400000E-01
C                           -8.288290E+04 1.698897E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.7306911446E+08 J   System Enthalpy =  7.8099109798E+07 J
     1573.00
*** MULTIPHASE - Stage 1* Results ***

Temperature =  1573.0000 K

Fixed pressure =  1.013250E+05 Pa,    1.000000E+00 atm

Component      Ref.Phase     Chem.Pot.    Activity     Amount/mol   Mass/kg
Fe                          -8.932961E+04 1.080699E-03 1.507153E+03 8.417000E+01
Ni                          -1.200466E+05 1.032074E-04 2.204805E+02 1.294000E+01
Al                          -1.942243E+05 3.552666E-07 5.967043E+01 1.610000E+00
Mo                          -1.233209E+05 8.034972E-05 1.042318E+01 1.000000E+00
Nb                          -1.633581E+05 3.762706E-06 2.583245E+00 2.400000E-01
C                           -8.386300E+04 1.641459E-03 3.330281E+00 4.000000E-02
Total                                                  1.803641E+03 1.000000E+02

Amount      Phase               Mole fraction of component within phase
compnt moles
                                Fe              Ni              Al
 1.8036E+03 FCC_A1             0.8356172       0.1222419       0.0330833

                                Mo              Nb              C
 1.8036E+03 FCC_A1             0.0057790       0.0014322       0.0018464

Gibbs Energy = -1.7467820680E+08 J   System Enthalpy =  7.8766603201E+07 J

                    ************************************
                    * WARNING/ERRORS HAVE BEEN DETECTED *
                    ************************************

  21840 Warnings: Multiphase, temperature range violation -  Unary data
      5 Warnings: Multiphase, Stage 1 - Less accuracy than normal

 MULTIPHASE OPTION ?
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