```
=mit st4 base run with small dt
0000100  new     transnt
0000102  si  si
110      air
115      1.0
*        tend  min   max  ssdtt min-ed maj-ed rest-freq
0000201  60.0  1.0-6  0.01  403     1     500    100000
*#####################################################
20800001 htgamw   003000100
20800002 htgamw   003000200
20800003 htgamw   003000300
20800004 htgamw   003000400
20800005 htgamw   003000500
20800006 htgamw   003000600
20800007 htgamw   003000700
20800008 htgamw   003000800
20800009 htgamw   003000900
20800010 htgamw   003001000
20800011 htmode   003000100
20800012 htmode   003000200
20800013 htmode   003000300
20800014 htmode   003000400
20800015 htmode   003000500
20800016 htmode   003000600
20800017 htmode   003000700
20800018 htmode   003000800
20800019 htmode   003000900
20800020 htmode   003001000
20800021 htrg     003000100
20800022 htrg     003000200
20800023 htrg     003000300
20800024 htrg     003000400
20800025 htrg     003000500
20800026 htrg     003000600
20800027 htrg     003000700
20800028 htrg     003000800
20800029 htrg     003000900
20800030 htrg     003001000
20800031 hif      -1
20800032 hig      -1
20800033 gammaw   -1
20800034 gammac   -1
*##########################################################
0010000  fill  tmdpvol
0010101  92903.0 1.44780 0.0  0.0  90.0  1.44780  0  0  0
0010200  3
0010201  0.0  2.068427e+06    294.261
*##########################################################
0020000  fill tmdpjun
0020101  1000000  3000000  6.618218e-04
0020200  1
0020202  0.0        0.411966       0.411966   0.0
0020203  2.25830     0.401301       0.401300   0.0
0020204  4.63095     0.395195       0.395195   0.0
0020205  8.03418     0.387970       0.387970   0.0
0020206  8.82821     0.383584       0.383584   0.0
```

```
0020207  9.26436    0.368447      0.368447   0.0
0020208  9.73929    0.365007      0.365007   0.0
0020209  10.3929    0.322950      0.322950   0.0
0020210  12.2829    0.317790      0.317790   0.0
0020211  13.9920    0.318220      0.318220   0.0
0020212  14.5491    0.312629      0.312629   0.0
0020213  17.6082    0.309018      0.309018   0.0
0020214  21.6889    0.308673      0.308673   0.0
0020215  25.4918    0.307555      0.307555   0.0
0020216  27.9108    0.303255      0.303255   0.0
0020217  32.9608    0.292074      0.292074   0.0
0020218  36.3804    0.284764      0.284764   0.0
0020219  38.4174    0.281066      0.281066   0.0
0020220  40.4460    0.277883      0.277883   0.0
0020221  40.6432    0.0        0.0        0.0
0020222  99.6432    0.0        0.0        0.0
*#########################################################
0030000  vertical pipe
 0030001  10          * ncells
0030101  3.2274e-02   10  *  cell area
0030301  0.1143      10  *  cell length
0030401  0.0        10  * cell volume
0030601  90.0       10  * vert ang
0030801  2.0-5  0  10  * wall rough & Hd
*      tlpvbfe    n-vol
0031001 1000000      10
*      jefvcahs
0031101 00000000      9
0031201  2  4.92286e+05  0.0      0.0   0.0   0.0  3
0031202  0  4.92286e+05  0.63702e+06  0.25602e+07 0.222222  0.0 4
0031203  2  4.92286e+05  1.0      0.0   0.0   0.0  10
0031301  0  0  0  9
*#########################################################
7770000  htsink pipe
7770001  10
7770101  1.0e6      10
7770301  0.1143      10
7770401  0.0        10
7770601  90.0       10
7770801  2.0-5  0  10
*      tlpvbfe    n-vol
7771001 0000000      10
*      jefvcahs
7771101 00000000      9
7771201  4  1.0135e+05    293.8 0.0   0.0   0.0  10
7771301  0  0  0  9
*#########################################################
*heat structure - steel plus insulation
10030000 10     16       2    1    0.10136
10030100 0      2
10030101 0.000818    10
10030102 0.01778    15
10030201 1      10
10030202 2      15
10030301 0.0    15
10030401 406.24  1 406.18  2  406.12  3  406.06  4  405.99  5  405.93  6
```

```
10030402 405.86 7 405.79 8 405.72 9 405.64 10 405.57 11 403.38 12
10030403 401.48 13 399.78 14 398.26 15 396.86 16
10030501 3010000 010000 1 1 0.1143 10
10030601 777010000 010000 1 1 0.1143 10
10030701 0 0 0 0 10
10030801 0.2027 1.14 1.14 0 0 0 0 1.0 10
10030901 0.2027 1.14 1.14 0 0 0 0 1.0 10
*##################################################
*material thermal properties
20100100 tbl/fctn 1 1 *s-steel
20100200 tbl/fctn 1 1 *fiberglass
*##################################################
*s-steel thermal conductivity
20100101 2.731500e+02 1.298051e+01
20100102 1.199817e+03 2.510603e+01
*##################################################
*s-steel volumetric heat capacity
20100151 2.731500e+02 3.830413e+06
20100152 3.664833e+02 3.830413e+06
20100153 4.220389e+02 3.964814e+06
20100154 4.775944e+02 4.099214e+06
20100155 5.331500e+02 4.233615e+06
20100156 5.887056e+02 4.334415e+06
20100157 6.442611e+02 4.435081e+06
20100158 6.998167e+02 4.502416e+06
20100159 8.109278e+02 4.636816e+06
20100160 1.366483e+03 5.376019e+06
*##################################################
*fiberglass thermal conductivity
20100201 2.731500e+02 3.489161e+00
20100202 1.199817e+03 3.489161e+00
*##################################################
*fiberglass volumetric heat capacity
20100251 2.731500e+02 2.240008e+04
20100252 1.366483e+03 2.240008e+04
*##################################################
*control variables
*pressurizer level
20500100 pzrlvl sum 1.0 0.0 1
20500101 0.0 0.1143 voidf 003010000
20500102 0.1143 voidf 003020000
20500103 0.1143 voidf 003030000
20500104 0.1143 voidf 003040000
20500105 0.1143 voidf 003050000
20500106 0.1143 voidf 003060000
20500107 0.1143 voidf 003070000
20500108 0.1143 voidf 003080000
20500109 0.1143 voidf 003090000
20500110 0.1143 voidf 003100000
```