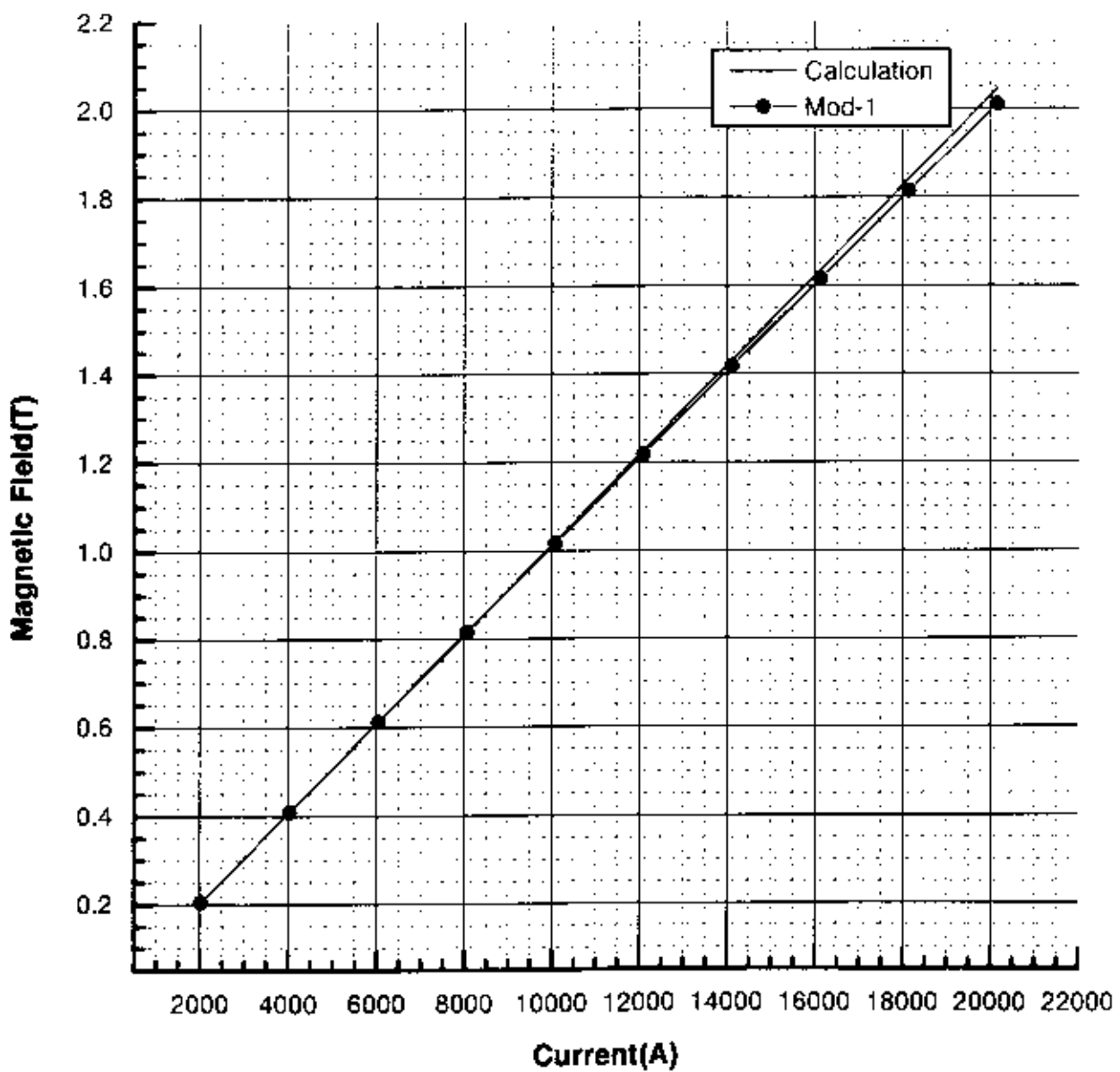
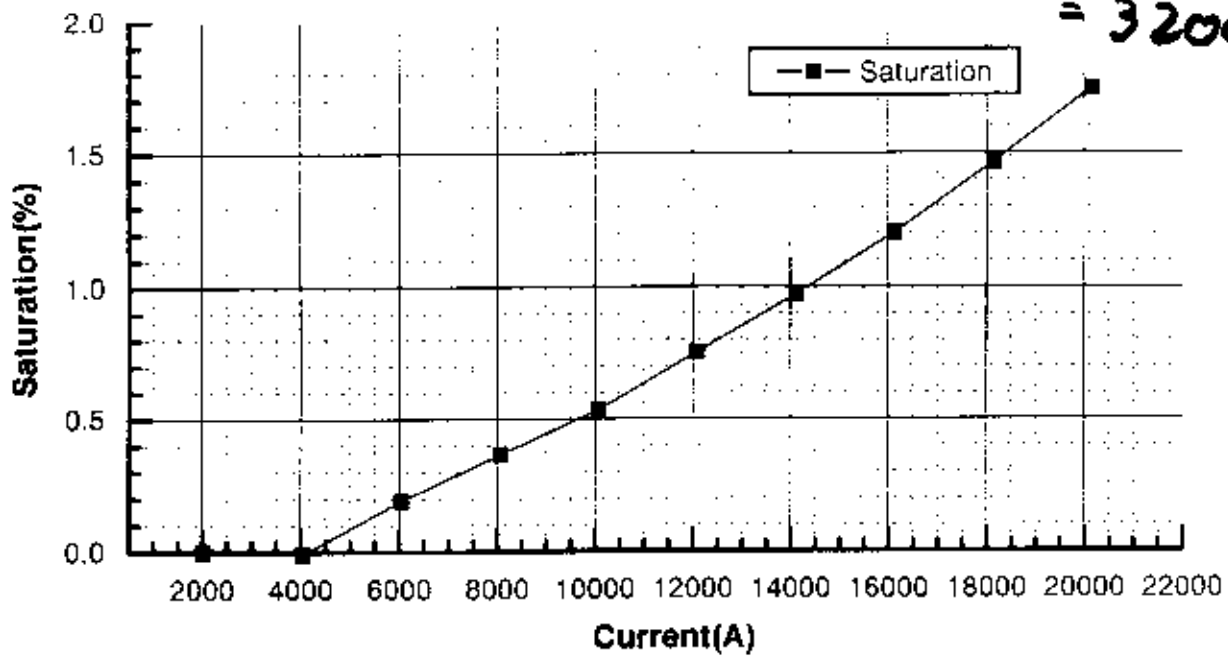
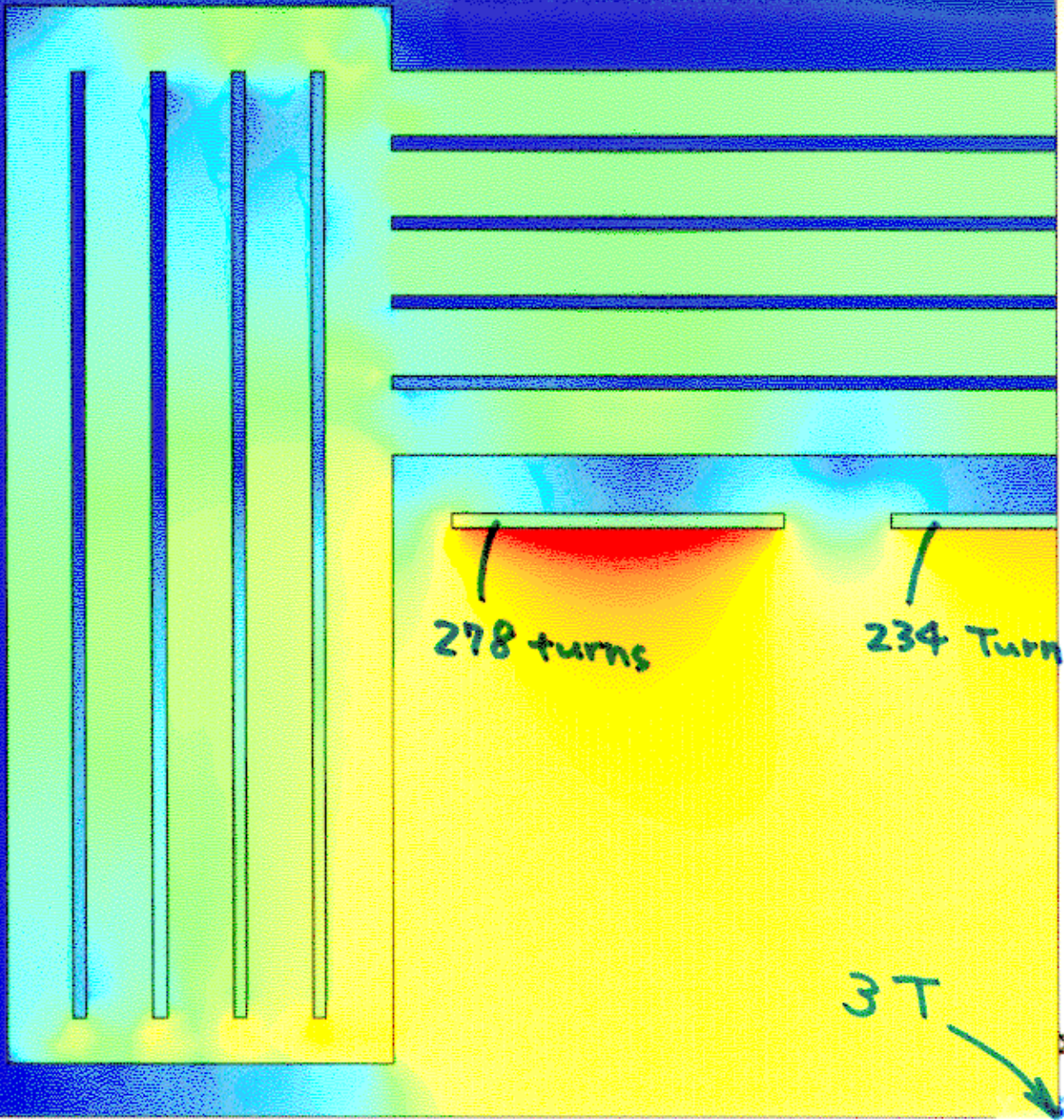


3T \Rightarrow 6%
= 32000 A.



1

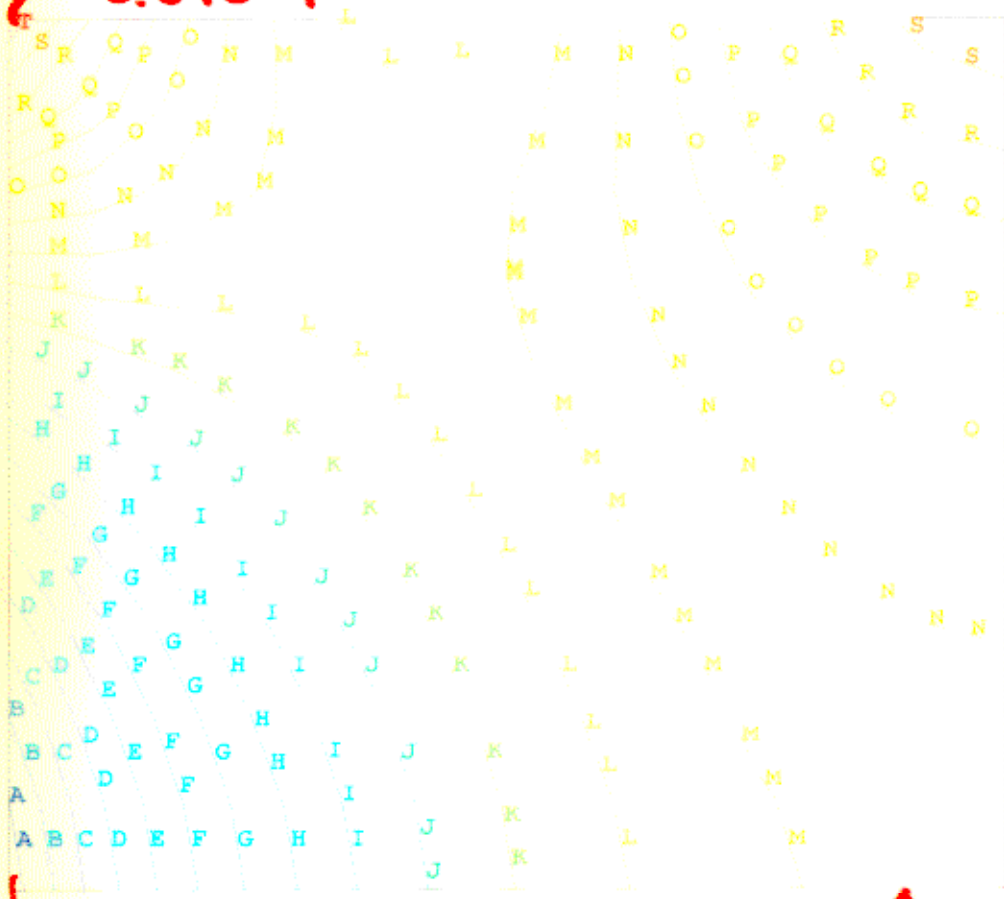


ANSYS 5.4
SEP 10 1999
11:21:57
NODAL SOLUTION
STEP=1
SUB =6
TIME=1
BSUM (AVG)
RSYS=0
PowerGraphics
EFACET=1
AVRES=Mat
SMN =.460E-04
SMX =3.902

■	.030527
■	.24389
■	.457254
■	.701098
■	.914462
■	1.158
■	1.372
■	1.616
■	1.829
■	2.073
■	2.286
■	2.53
■	2.743
■	2.987
■	3.201
■	3.444
■	3.658
■	3.902

2.3 m

3.015 T



```
ANSYS 5.4
SEP 10 1999
11:19:55
NODAL SOLUTION
STEP=1
SUB =6
TIME=1
BSUM      (AVG)
RSYS=0
PowerGraphics
EFACET=1
AVRES=Mat
SMN =2.971
SMX =3.015
A  =2.973
B  =2.975
C  =2.977
D  =2.979
E  =2.981
F  =2.983
G  =2.986
H  =2.988
I  =2.99
J  =2.992
K  =2.994
L  =2.996
M  =2.999
N  =3.001
O  =3.003
P  =3.005
Q  =3.007
R  =3.009
S  =3.012
T  =3.014
```

2.3 m

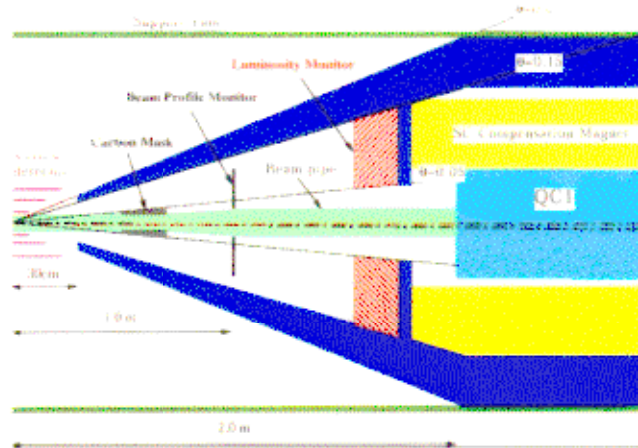
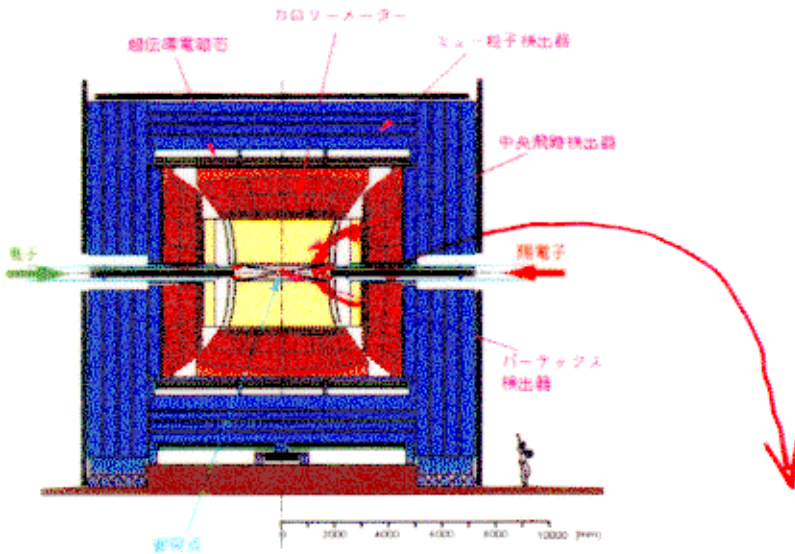
2.971 T

0.3 m
z=0

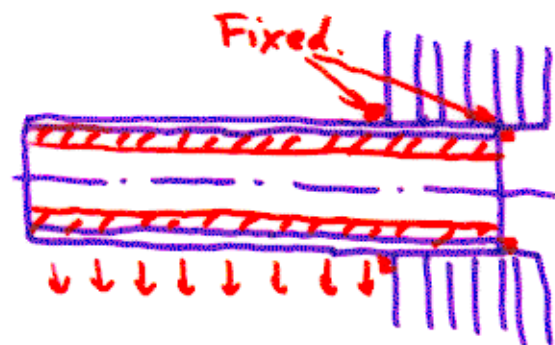
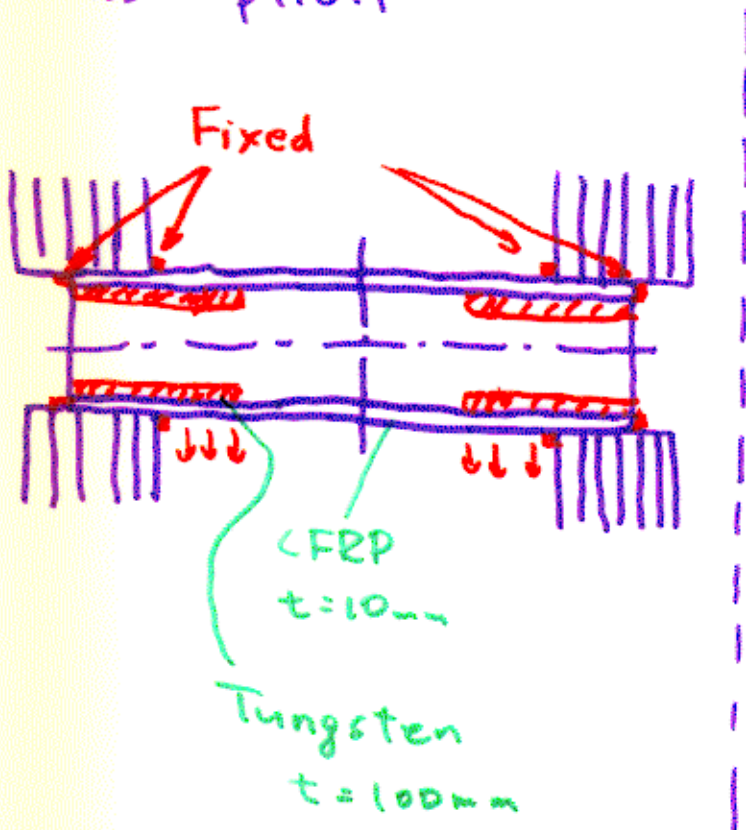
Unif = 1.4% (@ 3T)

1.0% (@ 2T)

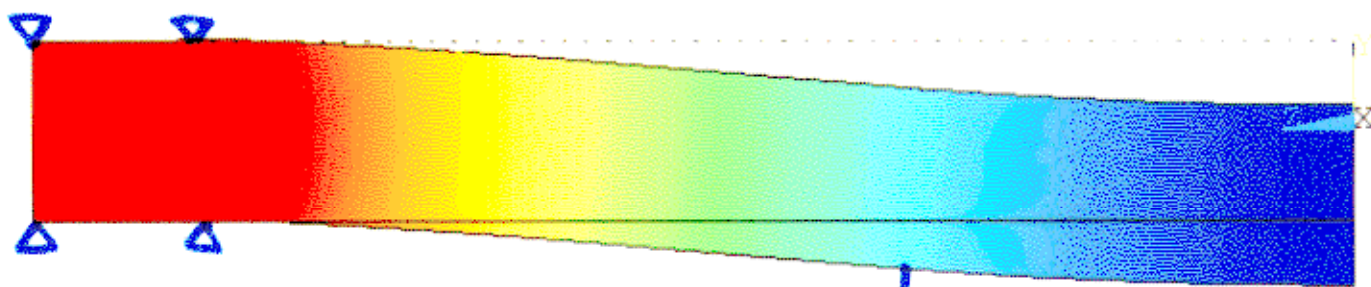
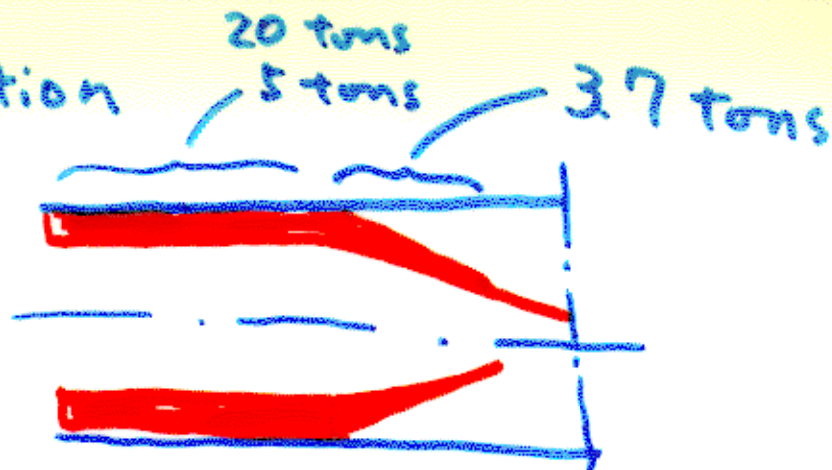
1. Introduction



Assumption



• Deformation



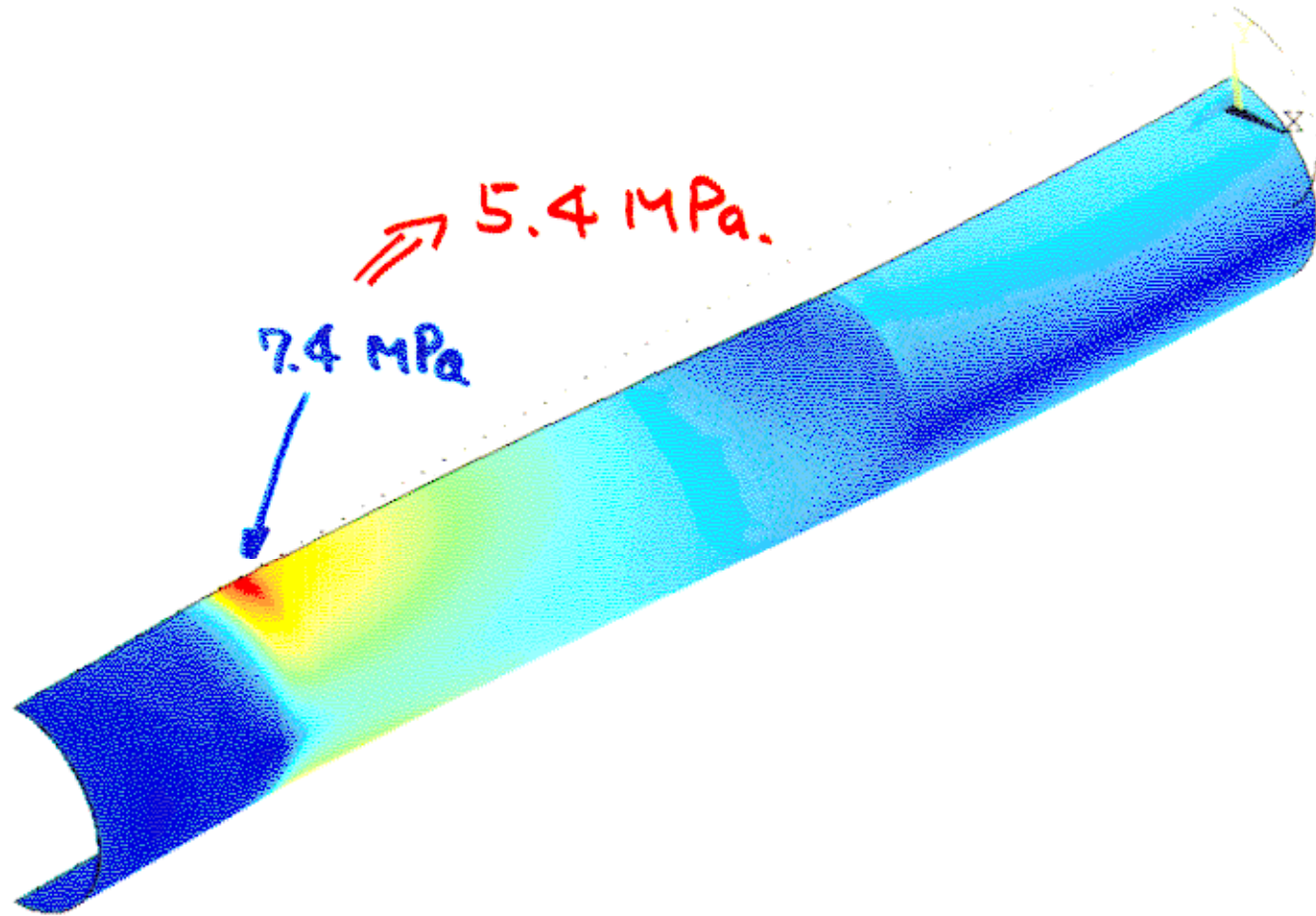
3.7 tons

0.19 mm

0.12 mm

ANSYS 5.4
SEP 10 1999
11:56:48
NODAL SOLUTION
STEP=1
SUB =1
TIME=1
UY (AVG)
RSYS=0
PowerGraphics
EFACET=1
AVRES=Mat
DMX =.185323
SMN =-.185323
SMX =.789E-03
-.183869
-.173691
-.163513
-.151881
-.141703
-.130071
-.119893
-.108261
-.098083
-.086451
-.076273
-.064641
-.054463
-.042831
-.032653
-.021021
-.010843
.789E-03

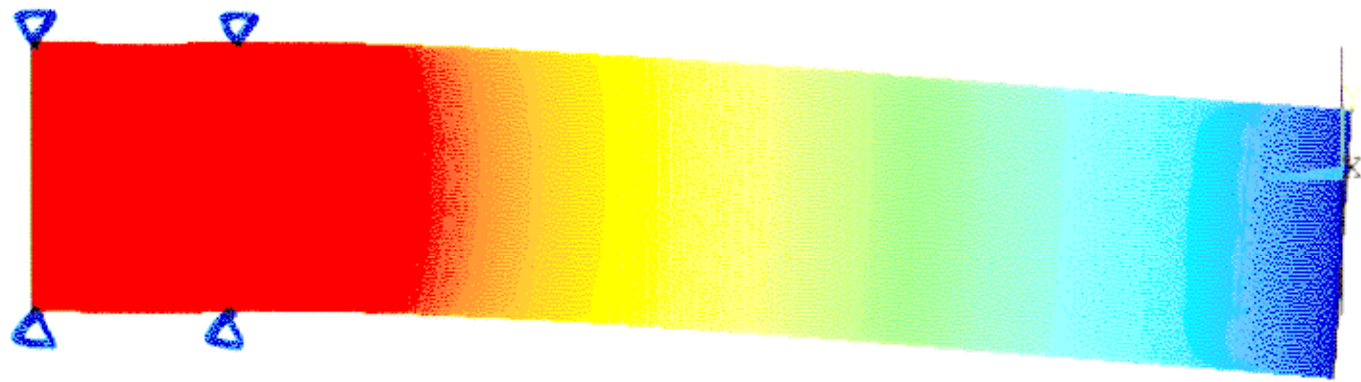
Stress



ANSYS 5.4
SEP 10 1999
11:58:51
NODAL SOLUTION
STEP=1
SUB =1
TIME=1
SEQV (AVG)
PowerGraphics
EFACET=1
AVRES=Mat
DMX =.185323
SMN =.236E-03
SMX =.740301

■	.006018
■	.04649
■	.086962
■	.127435
■	.167907
■	.208379
■	.248851
■	.289324
■	.329796
■	.370268
■	.410741
■	.451213
■	.491685
■	.532158
■	.57263
■	.613102
■	.653575
■	.694047
■	.740301

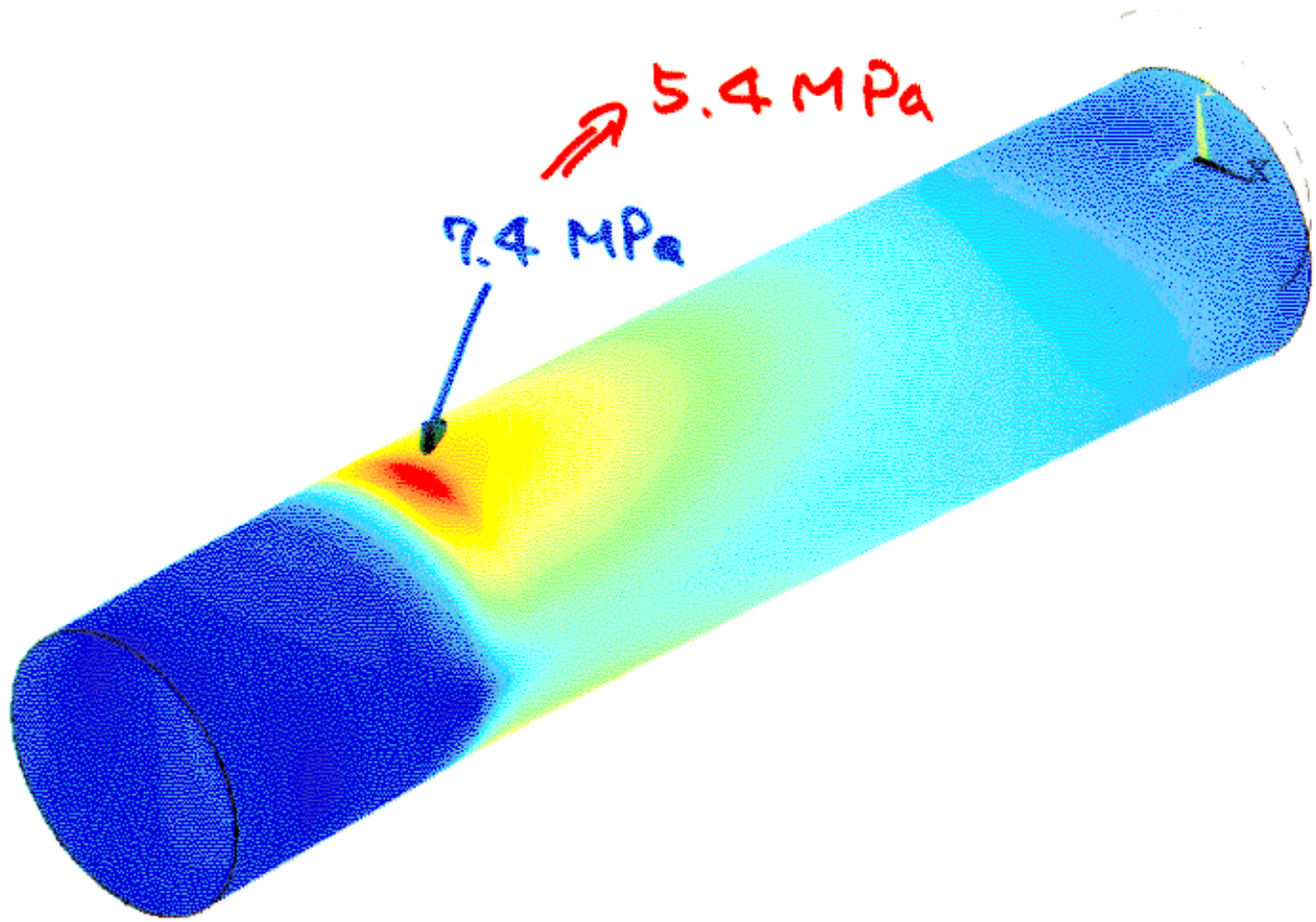
◦ Deformation



0.14 mm
0.095 mm

ANSYS 5.4
SEP 10 1999
12:05:04
NODAL SOLUTION
STEP=1
SUB =1
TIME=1
UY (AVG)
RSYS=0
PowerGraphics
EFACET=1
AVRES=Mat
DMX =.142113
SMN =-.140685
SMX =.792E-03
-.13958
-.131843
-.124106
-.115264
-.107527
-.098684
-.090947
-.082105
-.074368
-.065525
-.057788
-.048946
-.041209
-.032367
-.02463
-.015787
-.00805
.792E-03

Stress

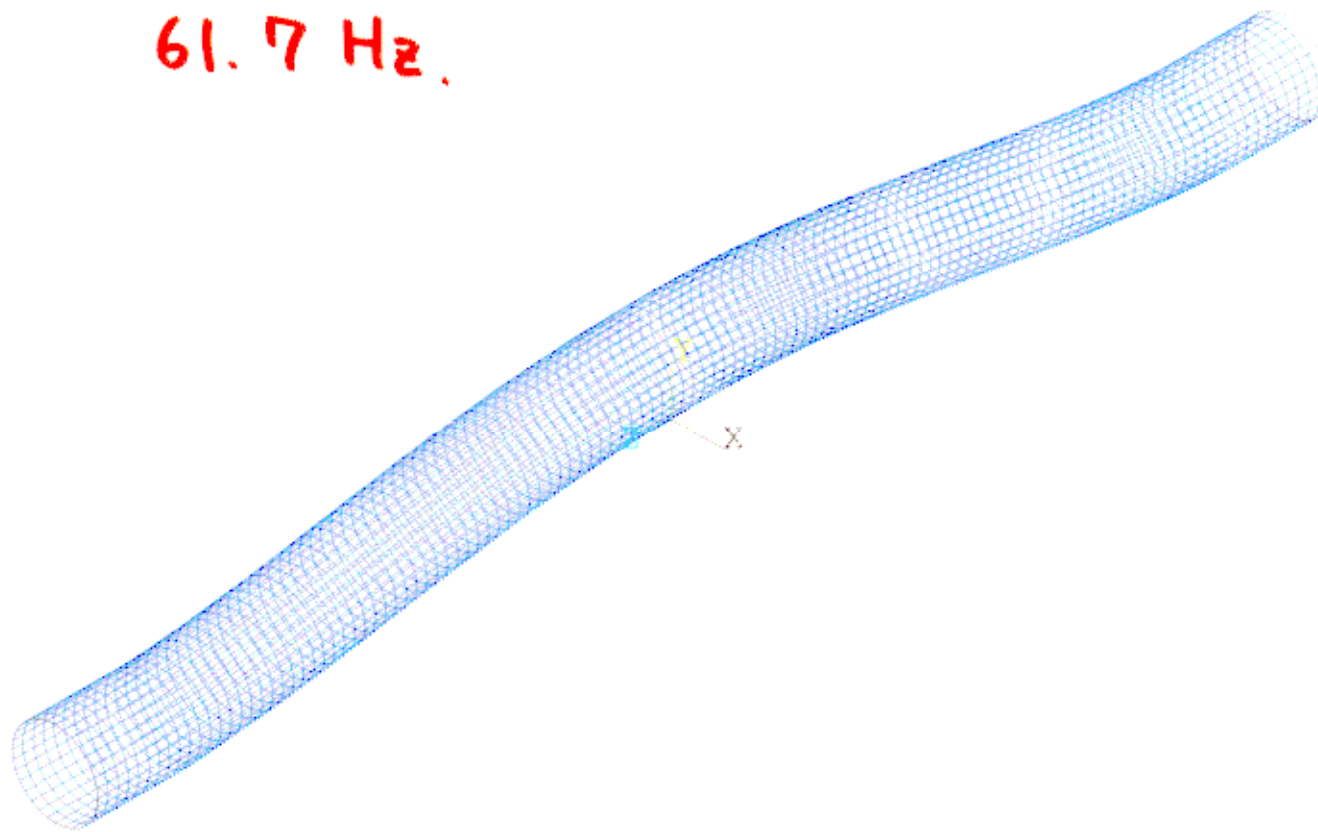


ANSYS 5.4
SEP 10 1999
12:09:00
NODAL SOLUTION
STEP=1
SUB =1
TIME=1
SEQV (AVG)
PowerGraphics
EFACET=1
AVRES=Mat
DMX =.142113
SMN =.749E-03
SMX =.748363
Color scale legend:
0.006589
0.047475
0.08836
0.129245
0.17013
0.211015
0.2519
0.292785
0.333671
0.374556
0.415441
0.456326
0.497211
0.538096
0.578982
0.619867
0.660752
0.701637
0.748363

Natural Frequency.

• 1st mode

61.7 Hz.

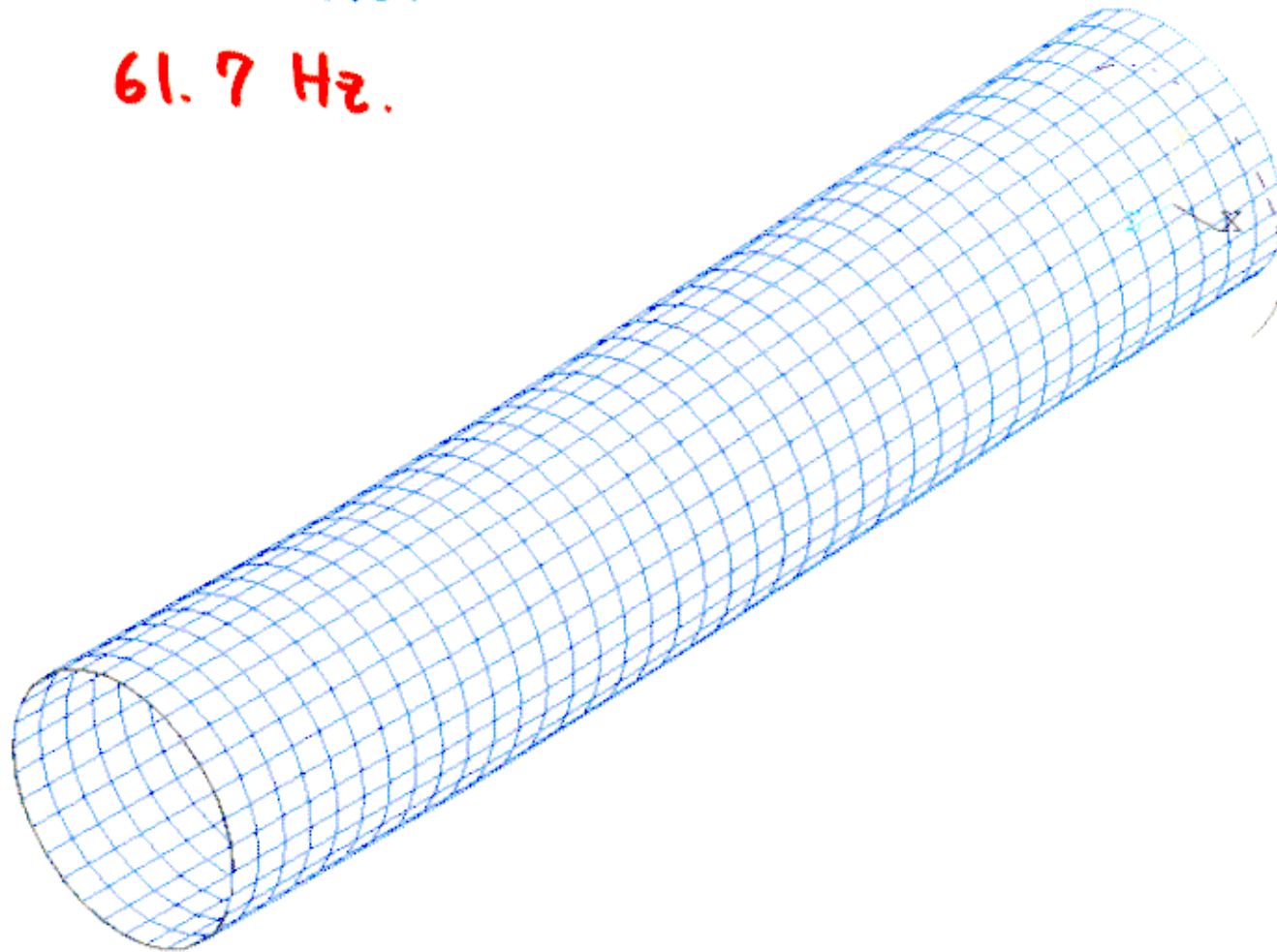


```
ANSYS 5.4  
SEP 10 1999  
12:36:47  
DISPLACEMENT  
STEP=1  
SUB =2  
PowerGraphics  
EFACET=1  
AVRES=Mat  
DMX =1.258
```

```
DSCA=476.864  
XV =1  
YV =1  
ZV =1  
DIST=4990  
YF =298.481
```

1st mode.

61.7 Hz.



```
ANSYS 5.4  
SEP 10 1999  
12:39:56  
DISPLACEMENT  
STEP=1  
SUB =1  
FREQ=61.654  
PowerGraphics  
EFACET=1  
AVRES=Mat  
DMX =1.331
```

```
DSCA=150.261  
XV =1  
YV =1  
ZV =1  
DIST=1889  
YF =98.305  
ZF =1986  
Z-BUFFER
```