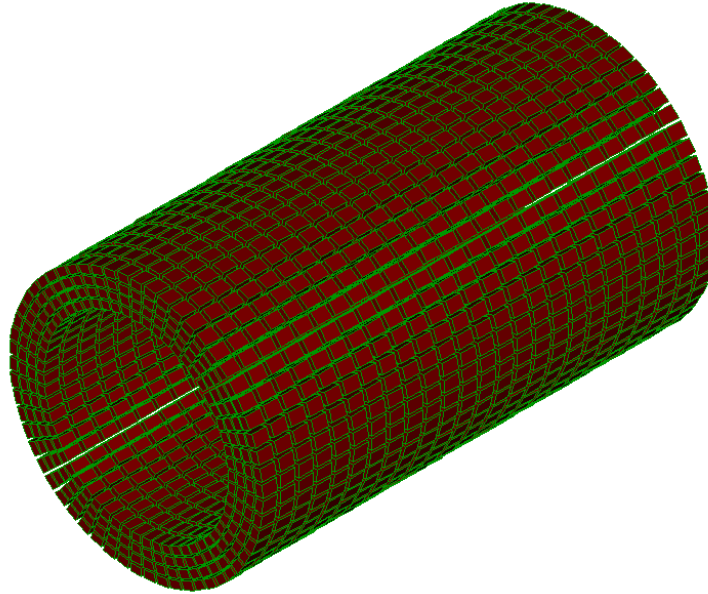


Comparison between Sargon (V8.50), NXNASTRAN and NEiNASTRAN - NORMAL MODES					
TEST 51	VALIDATION, CROSS CHECKS, RELIABILITY, BENCHMARK	Marco Croci	15/04/2008		



	Sargon (Clever)	NXNASTRAN	% errNX	NEiNASTRAN	% errNE
Model Name	tes51.WSR	tes51000.dat		tes51.NAS	
Output file	tes51.CEN	tes51000.f06		tes51.OUT	
Q1	5.298E-03	5.297E-03	0.015	5.297E-03	0.025
Q2	-2,998E-03	-2,996E-03	0,057	-2,996E-03	0,057
Q3	1,653E+00	1,647E+00	0,349	1,648E+00	0,319
Q4	3,593E+00	3,584E+00	0,255	3,587E+00	0,167
Q5	-1,556E+02	-1,557E+02	-0,051	-1,558E+02	-0,130

Compared Values:

Q1 = Load Set 1 - Node 3405 - Dy
 Q2 = Load Set 1 - Node 1850 - Dz
 Q3 = Load Set 1 - Node 3549 on solid element 2932 - Von Mises stress
 Q4 = Load Set 1 - Node 3402 on solid element 2697 - Von Mises stress
 Q5 = Load Set 1 - Node 7516 - Constraint force Fz

Translations: [mm] Forces: [N] Moments [Nmm]
 $\% \text{ errNX} = (\text{Sargon} - \text{NX}) / \text{NX} * 100;$ $\% \text{ errNE} = (\text{Sargon} - \text{NE}) / \text{NE} * 100$
 NXNASTRAN and NEiNASTRAN values are rounded up to 4 significant digits

Model data

Degrees of freedom = 20880
 Solid elements = 5800