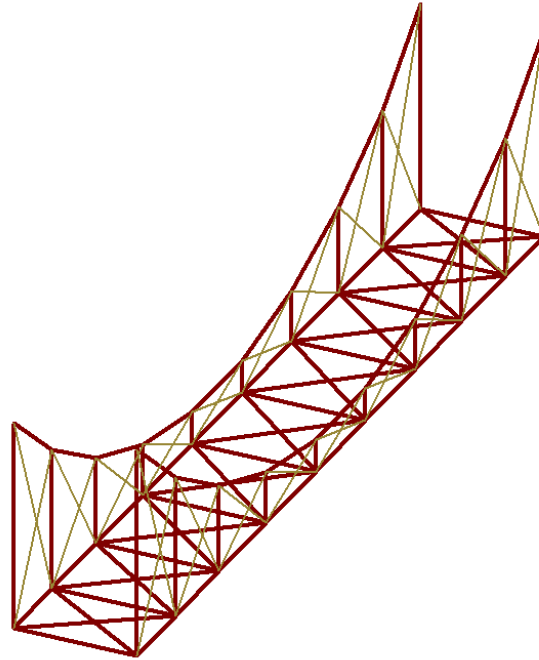


<b>Comparison between Sargon (V9.01), NXNASTRAN and NEiNASTRAN</b>					
<b>TEST 57</b>	<b>VALIDATION, CROSS CHECKS, RELIABILITY, BENCHMARK</b>	<b>Marco Croci</b>	<b>27/11/2008</b>		



	<b>Sargon (Clever)</b>	<b>NXNASTRAN</b>	<b>% errNX</b>	<b>NEiNASTRAN</b>	<b>% errNE</b>
<b>Model Name</b>	tes57.WSR	tes57000.dat		tes57.NAS	
<b>Output file</b>	tes57.CEN	tes57000.f06		tes57.OUT	
Q1	-3,622E+00	-3,622E+00	0,010	-3,621E+00	0,018
Q2	-2,406E-01	-2,406E-01	0,004	-2,406E-01	0,017
Q3	2,208E+03	2,208E+03	-0,012	2,208E+03	-0,004
Q4	-9,917E+04	-9,917E+04	0,001	-9,917E+04	0,003
Q5	2,007E+04	2,007E+04	-0,002	2,007E+04	0,006

### Compared Values:

- Q1 = Load Set 1 - Node 42 - Dz
- Q2 = Load Set 1 - Node 9 - Dx
- Q3 = Load Set 1 - Truss element 10 - Axial force (End1)
- Q4 = Load Set 1 - Beam element 52 - Bending moment M2 (End1)
- Q5 = Load Set 1 - Node 7 - Constraint Force Tx

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; in some cases sign of moment value is changed in order to use the same Sargon rule.

### Model data

Degrees of freedom = 204  
 Beam elements = 84  
 Truss elements = 36