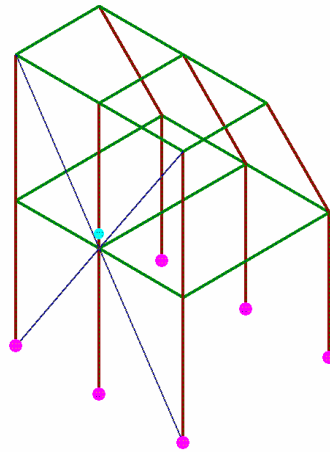


| Comparison between Sargon, NXNASTRAN and NEiNASTRAN |                                                  |             |            |
|-----------------------------------------------------|--------------------------------------------------|-------------|------------|
| TEST 03                                             | VALIDATION, CROSS CHECKS, RELIABILITY, BENCHMARK | Marco Croci | 05/04/2007 |



|             | Sargon<br>(Clever) | NXNASTRAN    | $\Delta_{rel}$ | NEiNASTRAN | $\Delta_{rel}$ |
|-------------|--------------------|--------------|----------------|------------|----------------|
| Model Name  | tes03.WSR          | tes03000.dat |                | tes03.NAS  |                |
| Output file | tes03.CEN          | tes03000.f06 |                | tes03.OUT  |                |
| Q1          | -1,081E+02         | -1,081E+02   | 0,000E+00      | -1,081E+02 | 0,000E+00      |
| Q2          | -1,609E-02         | -1,609E-02   | 0,000E+00      | -1,609E-02 | 0,000E+00      |
| Q3          | -4,615E+00         | -4,615E+00   | 0,000E+00      | -4,615E+00 | 0,000E+00      |
| Q4          | -9,173E-03         | -9,173E-03   | 0,000E+00      | -9,173E-03 | 0,000E+00      |
| Q5          | 1,152E+06          | 1,152E+06    | 0,000E+00      | 1,152E+06  | 0,000E+00      |
| Q6          | -1,267E+09         | -1,267E+09   | 0,000E+00      | -1,267E+09 | 0,000E+00      |
| Q7          | 2,049E+06          | 2,049E+06    | 0,000E+00      | 2,049E+06  | 0,000E+00      |
| Q8          | -1,017E+07         | -1,017E+07   | 0,000E+00      | -1,017E+07 | 0,000E+00      |
| Q9          | -1,055E+05         | -1,055E+05   | 0,000E+00      | -1,055E+05 | 0,000E+00      |
| Q10         | -6,102E+04         | -6,102E+04   | 0,000E+00      | -6,102E+04 | 0,000E+00      |

### Compared Values:

Q1 = Load Set 1 - Node 21 - Dy  
 Q2 = Load Set 1 - Node 24 - Rx  
 Q3 = Load Set 1 - Node 9 - Dz  
 Q4 = Load Set 1 - Node 22 - Ry  
 Q5 = Load Set 1 - Node 10 - Force Ty on Constraint  
 Q6 = Load Set 1 - Node 16 - Moment Mx on Constraint  
 Q7 = Load Set 1 - Element Truss 3 - Axial Force (End1)  
 Q8 = Load Set 1 - Element Beam 26 - Bending Moment 2 (End2)  
 Q9 = Load Set 1 - Element Beam 9 - Axial Force Force (End1)  
 Q10= Load Set 1 - Element Beam 9 - Shear Force 3 (End2)

Translations: [mm] Forces: [N] Moments [Nmm]

$\Delta_{rel}$  is computed between Sargon and NX and between Sargon and NEi (see introduction).  
 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.