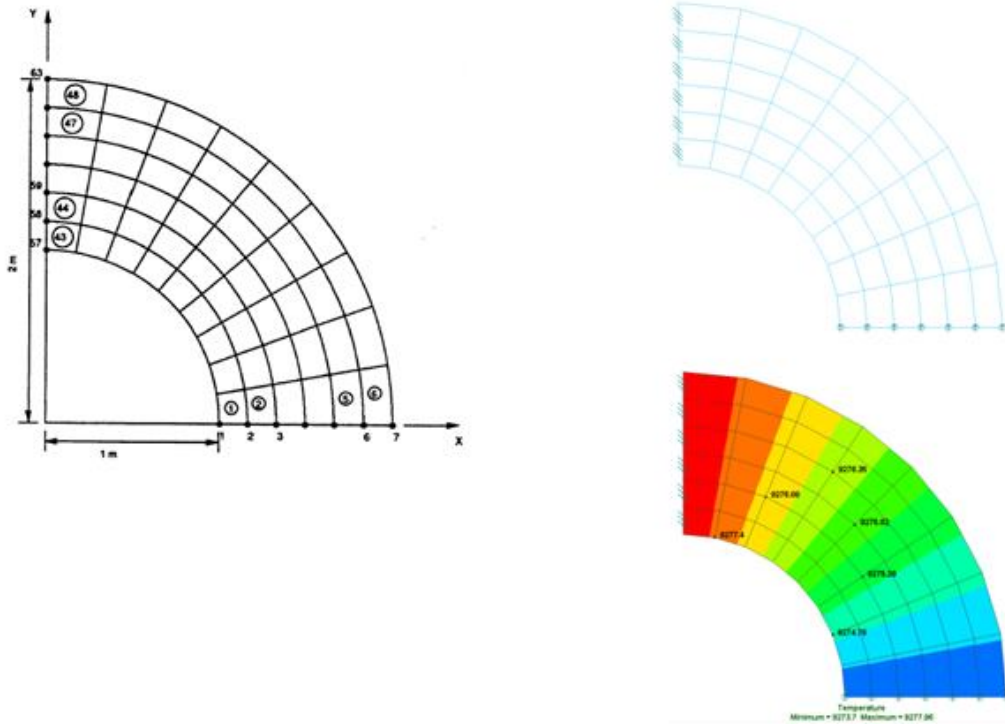


Magneto-static potential distribution inside a coaxial cable (Analogous field problem)



Material property : Isotropic, K_{XX}, K_{YY} : (permeability of air, μ_0) = $12.566371 \times 10^{-7} H/m$
Element type : 2-D Linear quadrilateral elements. Along the line $\phi = 0$ the magnetic scalar potential is set to an arbitrary value of 9.2737×10^3 and the magnetic flux density along $\phi = \frac{\pi}{2}$ is specified.

Finite element statistics :

| | | |
|-----------------|--------------------|--------------------|
| Number of nodes | Number of elements | Degrees of freedom |
| 63 | 48 | 56 |

| Output parameters | Theoretical value | FEAST ^{SMT} | NISA2 [®] |
|---------------------------------------------|-------------------|----------------------|--------------------|
| Magnetic scalar potential at node locations | | | |
| Node15($\phi = 22.5^\circ$) | 9274.33 | 9274.76 | 9274.37 |
| Node24($\phi = 33.75^\circ$) | 9274.64 | 9275.29 | 9274.55 |
| Node32($\phi = 45^\circ$) | 9274.95 | 9275.82 | 9274.74 |
| Node40($\phi = 56.25^\circ$) | 9275.26 | 9276.35 | 9274.92 |
| Node45($\phi = 67.5^\circ$) | 9275.58 | 9276.88 | 9275.11 |
| Node50($\phi = 78.75^\circ$) | 9275.89 | 9277.41 | 9275.29 |