14.97   SOLID97 — 3–D Magnetic Solid
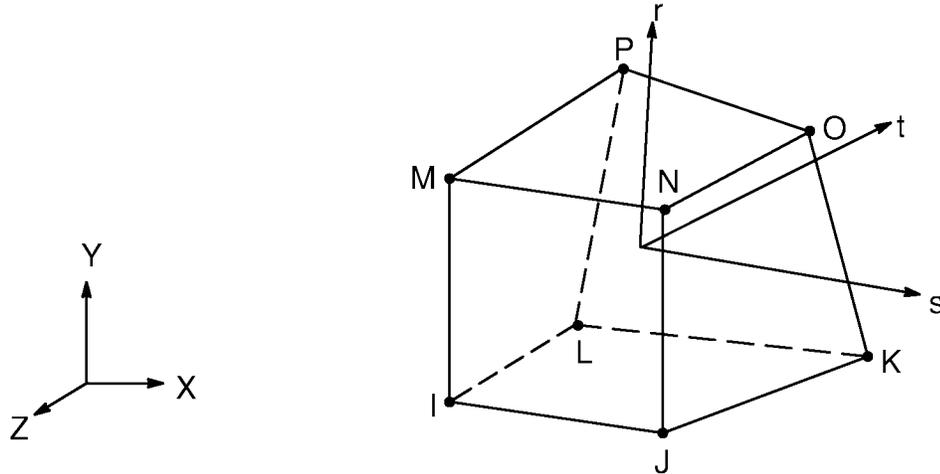
Matrix or Vector	Shape Functions	Integration Points
Magnetic Vector Potential Coefficient Matrix	Equations (12.8.18–7), (12.8.18–8), and (12.8.18–9)	2 x 2 x 2
Electric Potential Coefficient Matrix	Equation (12.8.18–21)	2 x 2 x 2
Load Vector of Magnetism due to Source Currents, Permanent Magnets, and Applied Currents	Same as coefficient matrix	2 x 2 x 2

Load Type	Distribution
Current Density, Voltage Load and Phase Angle Distribution	Trilinearly thru element

References: Coulomb(76), Mohammed(118), Biro et al(120)

14.97.1   Other Applicable Sections

Sections 5.2 and 5.3 contain a discussion of the 2–D magnetic vector potential formulation which is similar to the 3–D formulation of this element. Section 13.1 describes integration point locations.