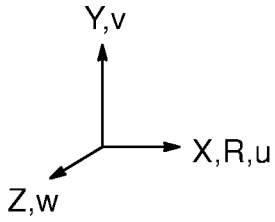
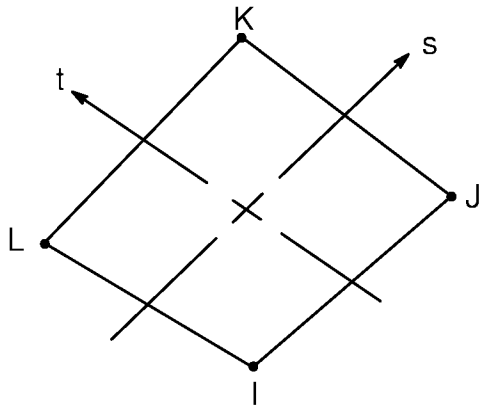
14.106 VISCO106 — 2–D Viscoplastic Solid





Matrix or Vector	Geometry	Shape Functions	Integration Points
Stiffness Matrix	Quad	Equations (12.6.5–1), (12.6.5–2), and (12.6.5–3)	2 x 2
	Triangle	Equations (12.6.1–1), (12.6.1–2), and (12.6.1–3)	3 if axisymmetric and 1 if plane
Mass Matrix	Same as stiffness matrix		Same as stiffness matrix
Thermal Load Vector	Same as stiffness matrix		Same as stiffness matrix
Pressure Load Vector	Same as mass matrix, specialized to face		2

Load Type	Distribution
Element Temperature	Bilinear across element, constant thru thickness or around circumference
Nodal Temperature	Same as element temperature distribution
Pressure	Linear along each face

References: Oden(123), Weber et al.(127), Anand(159) and Brown et al.(147)

14.106.1 Other Applicable Sections

For the basic element formulation refer to Section 14.107. Rate–dependent plasticity (Anand's model) is described in Section 4.2. Section 13.1 describes integration point locations.