

```

config zextra 1
def mises
; --- calculate and store Von Mises stress in zone extension 1 ---
  p_z = zone_head
  max_mises = 0.0
  loop while p_z # null
    mstr = (sxx(p_z) + syy(p_z) + szz(p_z)) / 3.
    dsxx = sxx(p_z) - mstr
    dsyy = syy(p_z) - mstr
    dszz = szz(p_z) - mstr
    dsxy = sxy(p_z)
    dsxz = sxz(p_z)
    dsyz = syz(p_z)
    vmstr2 = 1.5 * (dsxx*dsxx + dsyy*dsyy + dszz*dszz)
    vmstr2 = vmstr2 + 3. * (dsxy*dsxy + dsxz*dsxz + dsyz*dsyz)
    if vmstr2 > 0.0 then
      z_extra(p_z, 1) = sqrt(vmstr2)
    else
      z_extra(p_z, 1) = 0.0
    endif
    max_mises = max(max_mises, z_extra(p_z, 1))
    p_z = z_next(p_z)
  end_loop
end
mises
plot cont zextra 1 alias 'Von Mises Stress' average
print max_mises

```