The following observations are made from the numerical results presented in the previous chapter.

1) In order to reduce the stress levels in the critical region, knuckle of variable thickness is unavoidable in the torispherical headed pressure vessels. Of the two methods considered to obtain the knuckle of variable thickness, the spline method is more appropriate as it results in lower von Mises stress indices.

2) In the torispherical domes, the net compressive hoop stress is experienced in the knuckle region which is of concern to the designer, as it will lead to failure by buckling. Use of knuckle of variable thickness is expected to avoid this condition. However, this issue has not been addressed to in the present study.

3) Higher values of crown-to-knuckle radii ratios are desirable from the point of view of reducing the vessel length, particularly in certain critical applications such as rocket motor casing. The shorter the length the better the stability control of vehicle during flight.

4) Use of four node quadrilateral element with incompatible mode is advantageous from both numerical accuracy and computational efficiency points of view.
5) The magnitude of hoop compressive stress in the knuckle region depends on the crown-to-knuckle radii ratio. The compressive stress indicates that the knuckle tries to move inward, when it is subjected to internal pressure.

6) Inward displacement in knuckle region is considerably reduced for the case of knuckle of variable thickness.